CONTENTS OF VOLUME 274

January 1978

ALBINUS Margitta, BLAIR E.L., HIRST B.H. & REED J.D. The effect of anaesthesia on pentagastrin stimulated gastric acid secretion in the cat. 1

MENGE H., MURER H. & ROBINSON J.W.L. Glucose transport by brush-border membrane vesicles after proximal resection or ileo-jejunal transposition in the rat. 9

BOYD C.A.R. & PARSONS D.S. Effects of vascular perfusion on the accumulation, distribution and transfer of 3-*O*-methyl-D-glucose within and across the small intestine. 17

SATO Fusako & SATO Kenzo Secretion of a potassium-rich fluid by the secretory coil of the rat paw eccrine sweat gland. 37

KELLY S.S. The effect of age on neuromuscular transmission. 51

FITZSIMONS J.T. & WIRTH J.B. The renin-angiotensin system and sodium appetite. 63

IWATSUKI N. & PETERSEN D.H. Pancreatic acinar cells: acetylcholine-evoked electrical uncoupling and its ionic dependency. 81

LEVICK J.R. & MICHEL C.C. The effects of position and skin temperature on the capillary pressures in the fingers and toes. 97

BROWN A.G. & FYFFE R.E.W. The morphology of group Ia afferent fibre collaterals in the spinal cord of the cat. 111

BLAKE William D. & LIN K.K. Hepatic portal vein infusion of glucose and sodium solutions on the control of saline drinking in the rat. 129

DANIEL P.M., LOVE E.R. & PRATT O.E. The effect of age upon the influx of glucose into the brain. 141

EDVINSSON L., HARDEBO J.E., MacKENZIE E.T. & OWMAN Ch. Effect of exogenous noradrenaline on local cerebral blood flow after osmotic opening of the blood–brain barrier in the rat. 149

SILINSKY E.M. On the role of barium in supporting the asynchronous release of acetylcholine quanta by motor nerve impulses. 157

ROSS W.N. & STUART Ann E. Voltage sensitive calcium channels in the presynaptic terminals of a decrementally conducting photoreceptor. 173

McDONALD T.F. & TRAUTWEIN W. Membrane currents in cat myocardium: separation of inward and outward components. 193

CLARET M., GARAY R. & GIRAUD F. The effect of membrane cholesterol on the sodium pump in red blood cells. 247

GERSCHENFELD H. M., HAMON M. & PAUPARDIN-TRITSCH Danièle Release of endogenous serotonin from two identified serotonin-containing neurones and the physiological role of serotonin re-uptake. 265

GAGE Peter W., MCBURNEY Robert N. & VAN HELDEN Dirk Octanol reduces end-plate channel lifetime. 279

DENNIS M.J. & YIP J. W. Formation and elimination of foreign synapses on adult salamander muscle. 299

FRENCH A.S. & JÄRVILEHTO M. The dynamic behaviour of photoreceptor cells in the fly in response to random (white noise) stimulation at a range of temperatures. 311

ATHERTON John C. Lability of renal papillary tissue composition in the rat. 323

BOWMAKER J.K., DARTNALL H.J.A., LYTHGOE J.N. & MOLLON J.D. The visual pigments of rods and cones in the rhesus monkey, *Macaca mulatta*. 329

ANGELL-JAMES Jennifer E. & DALY M. De Burgh The effects of artificial lung inflation on reflexly induced bradycardia associated with apnoea in the dog. 349

HARADA E. & RUBIN R.P. Stimulation of renin secretion and calcium efflux from the isolated perfused cat kidney by noradrenaline after prolonged calcium deprivation. 367

GARNIER Didier, NARGEOT Joël, OJEDA Carlos & ROUGIER Oger The action of acetylcholine on background conductance in frog atrial trabeculae. 381

BROKENSHA G. & WESTBURY D.R. Modification by previous afferent discharge of the adaptation of frog muscle spindles following an extension. 397

CURTIS K.J., KIM Y.S., PERDOMO J.M., SILK D.B.A. & WHITEHEAD J.S. Protein digestion and absorption in the rat. 409

HANSEN BAY Christina M. The control of enzyme secretion from fly salivary glands. 421

HLADKY S.B. & RINK T.J. Osmotic behaviour of human red blood cells: an interpretation in terms of negative intracellular fluid pressure. 437

SNART R.S. & TAYLOR Elizabeth Aldosterone effects on renal metabolism. 447

PONTE J. & PURVES M.J. Carbon dioxide and venous return and their interaction as stimuli to ventilation in the cat. 455

BURN-MURDOCH R.A., FISHER Margaret A. & HUNT J.N. The slowing of gastric emptying by proteins in test meals. 477

LLADOS F. & ZAPATA P. Effects of dopamine analogues and antagonists on carotid body chemosensors *in situ*. 487

LLADOS F. & ZAPATA P. Effects of adrenoceptor stimulating and blocking agents on carotid body chemosensory inhibition. 501

GIFFIN Fred & MITCHELL Donald E. The rate of recovery of vision after early monocular deprivation in kittens. 511

RITCHIE J.M. & STRAUB R. W. Increase in efflux of inorganic phosphate during electrical activity in small non-myelinated nerve fibres. 539

CYNADER Max & REGAN D. Neurones in cat parastriate cortex sensitive to the direction of motion in three-dimensional space. 549

CHALUPA Leo M. & RHOADES Robert W. Modification of visual response properties in the superior colliculus of the golden hamster following stroboscopic rearing. 571

BUTLER I.J., DRACHMAN D.B. & GOLDBERG A.M. The effect of disuse on cholinergic enzymes. 593

BLASDEL Gary G. & PETTIGREW John D. Effect of prior visual experience on cortical recovery from the effects of unilateral eyelid suture in kittens. 601

SUNDLÖF G. & WALLIN B.G. Human muscle nerve sympathetic activity at rest. Relationship to blood pressure and age. 621

BREHM Paul, DUNLAP Kathleen & ECKERT Roger Calcium-dependent repolarization in *Paramecium*. 639

AUTHOR INDEX

(D) Denotes Demonstration (T) Title only

ALBINUS Margitta, BLAIR E.L., HIRST B.H. & REED J.D. The effect of anaesthesia on pentagastrin stimulated gastric acid secretion in the cat. 1

ANGELL-JAMES Jennifer E. & DALY M. De Burgh The effects of artificial lung inflation on reflexly induced bradycardia associated with apnoea in the dog. 349

ATHERTON John C. Lability of renal papillary tissue composition in the rat. 323

BLAIR E.L. *see* ALBINUS Margitta, BLAIR E.L., HIRST B.H. & REED J.D. The effect of anaesthesia on pentagastrin stimulated gastric acid secretion in the cat. 1

BLAKE William D. & LIN K.K. Hepatic portal vein infusion of glucose and sodium solutions on the control of saline drinking in the rat. 129

BLASDEL Gary G. & PETTIGREW John D. Effect of prior visual experience on cortical recovery from the effects of unilateral eyelid suture in kittens. 601

BOWMAKER J.K., DARTNALL H.J.A., LYTHGOE J.N. & MOLLON J.D. The visual pigments of rods and cones in the rhesus monkey, *Macaca mulatta*. 329

BOYD C.A.R. & PARSONS D.S. Effects of vascular perfusion on the accumulation, distribution and transfer of 3-*O*-methyl-D-glucose within and across the small intestine. 17

BREHM Paul, DUNLAP Kathleen & ECKERT Roger Calcium-dependent repolarization in *Paramecium*. 639

BROKENSHA G. & WESTBURY D.R. Modification by previous afferent discharge of the adaptation of frog muscle spindles following an extension. 397

BROWN A.G. & FYFFE R.E.W. The morphology of group Ia afferent fibre collaterals in the spinal cord of the cat. 111

BURN-MURDOCH R.A., FISHER Margaret A. & HUNT J.N. The slowing of gastric emptying by proteins in test meals. 477

BUTLER I.J., DRACHMAN D.B. & GOLDBERG A.M. The effect of disuse on cholinergic enzymes. 593

CHALUPA Leo M. & RHOADES Robert W. Modification of visual response properties in the superior colliculus of the golden hamster following stroboscopic rearing. 571

CLARET M., GARAY R. & GIRAUD F. The effect of membrane cholesterol on the sodium pump in red blood cells. 247

CURTIS K.J., KIM Y.S., PERDOMO J.M., SILK D.B.A. & WHITEHEAD J.S. Protein digestion and absorption in the rat. 409

CYNADER Max & REGAN D. Neurones in cat parastriate cortex sensitive to the direction of motion in three-dimensional space. 549

DALY M. De Burgh *see* ANGELL-JAMES Jennifer E. & DALY M. De Burgh The effects of artificial lung inflation on reflexly induced bradycardia associated with apnoea in the dog. 349

DANIEL P.M., LOVE E.R. & PRATT O.E. The effect of age upon the influx of glucose into the brain. 141

DARTNALL H.J.A. *see* BOWMAKER J.K., DARTNALL H.J.A., LYTHGOE J.N. & MOLLON J.D. The visual pigments of rods and cones in the rhesus monkey, *Macaca mulatta*. 329

DENNIS M.J. & YIP J. W. Formation and elimination of foreign synapses on adult salamander muscle. 299

DRACHMAN D.B. *see* BUTLER I.J., DRACHMAN D.B. & GOLDBERG A.M. The effect of disuse on cholinergic enzymes. 593

DUNLAP Kathleen *see* BREHM Paul, DUNLAP Kathleen & ECKERT Roger Calcium-dependent repolarization in *Paramecium*. 639

ECKERT Roger *see* BREHM Paul, DUNLAP Kathleen & ECKERT Roger Calcium-dependent repolarization in *Paramecium*. 639

EDVINSSON L., HARDEBO J.E., MacKENZIE E.T. & OWMAN Ch. Effect of exogenous noradrenaline on local cerebral blood flow after osmotic opening of the blood–brain barrier in the rat. 149

FISHER Margaret A. *see* BURN-MURDOCH R.A., FISHER Margaret A. & HUNT J.N. The slowing of gastric emptying by proteins in test meals. 477

FITZSIMONS J.T. & WIRTH J.B. The renin-angiotensin system and sodium appetite. 63

FRENCH A.S. & JÄRVILEHTO M. The dynamic behaviour of photoreceptor cells in the fly in response to random (white noise) stimulation at a range of temperatures. 311

FYFFE R.E.W. *see* BROWN A.G. & FYFFE R.E.W. The morphology of group Ia afferent fibre collaterals in the spinal cord of the cat. 111

GAGE Peter W., MCBURNEY Robert N. & VAN HELDEN Dirk Octanol reduces end-plate channel lifetime. 279

GARAY R. *see* CLARET M., GARAY R. & GIRAUD F. The effect of membrane cholesterol on the sodium pump in red blood cells. 247

GARNIER Didier, NARGEOT Joël, OJEDA Carlos & ROUGIER Oger The action of acetylcholine on background conductance in frog atrial trabeculae. 381

GERSCHENFELD H. M., HAMON M. & PAUPARDIN-TRITSCH Danièle Release of endogenous serotonin from two identified serotonin-containing neurones and the physiological role of serotonin re-uptake. 265

GIFFIN Fred & MITCHELL Donald E. The rate of recovery of vision after early monocular deprivation in kittens. 511

GIRAUD F. *see* CLARET M., GARAY R. & GIRAUD F. The effect of membrane cholesterol on the sodium pump in red blood cells. 247

GOLDBERG A.M. *see* BUTLER I.J., DRACHMAN D.B. & GOLDBERG A.M. The effect of disuse on cholinergic enzymes. 593

HAMON M. *see* GERSCHENFELD H. M., HAMON M. & PAUPARDIN-TRITSCH Danièle Release of endogenous serotonin from two identified serotonin-containing neurones and the physiological role of serotonin re-uptake. 265

HANSEN BAY Christina M. The control of enzyme secretion from fly salivary glands. 421

HARADA E. & RUBIN R.P. Stimulation of renin secretion and calcium efflux from the isolated perfused cat kidney by noradrenaline after prolonged calcium deprivation. 367

HARDEBO J.E. *see* EDVINSSON L., HARDEBO J.E., MACKENZIE E.T. & OWMAN Ch. Effect of exogenous noradrenaline on local cerebral blood flow after osmotic opening of the blood–brain barrier in the rat. 149

HIRST B.H. *see* ALBINUS Margitta, BLAIR E.L., HIRST B.H. & REED J.D. The effect of anaesthesia on pentagastrin stimulated gastric acid secretion in the cat. 1

HLADKY S.B. & RINK T.J. Osmotic behaviour of human red blood cells: an interpretation in terms of negative intracellular fluid pressure. 437

HUNT J.N. *see* BURN-MURDOCH R.A., FISHER Margaret A. & HUNT J.N. The slowing of gastric emptying by proteins in test meals. 477

IWATSUKI N. & PETERSEN D.H. Pancreatic acinar cells: acetylcholine-evoked electrical uncoupling and its ionic dependency. 81

JÄRVILEHTO M. *see* FRENCH A.S. & JÄRVILEHTO M. The dynamic behaviour of photoreceptor cells in the fly in response to random (white noise) stimulation at a range of temperatures. 311

KELLY S.S. The effect of age on neuromuscular transmission. 51

KIM Y.S. *see* CURTIS K.J., KIM Y.S., PERDOMO J.M., SILK D.B.A. & WHITEHEAD J.S. Protein digestion and absorption in the rat. 409

LEVICK J.R. & MICHEL C.C. The effects of position and skin temperature on the capillary pressures in the fingers and toes. 97

LIN K.K. *see* BLAKE William D. & LIN K.K. Hepatic portal vein infusion of glucose and sodium solutions on the control of saline drinking in the rat. 129

LLADOS F. & ZAPATA P. Effects of dopamine analogues and antagonists on carotid body chemosensors *in situ*. 487

LLADOS F. & ZAPATA P. Effects of adrenoceptor stimulating and blocking agents on carotid body chemosensory inhibition. 501

LOVE E.R. *see* DANIEL P.M., LOVE E.R. & PRATT O.E. The effect of age upon the influx of glucose into the brain. 141

LYTHGOE J.N. *see* BOWMAKER J.K., DARTNALL H.J.A., LYTHGOE J.N. & MOLLON J.D. The visual pigments of rods and cones in the rhesus monkey, *Macaca mulatta*. 329

McBURNEY Robert N. *see* GAGE Peter W., McBURNEY Robert N. & VAN HELDEN Dirk Octanol reduces end-plate channel lifetime. 279

McDONALD T.F. & TRAUTWEIN W. Membrane currents in cat myocardium: separation of inward and outward components. 193

MacKENZIE E.T. *see* EDVINSSON L., HARDEBO J.E., MacKENZIE E.T. & OWMAN Ch. Effect of exogenous noradrenaline on local cerebral blood flow after osmotic opening of the blood–brain barrier in the rat. 149

MENGE H., MURER H. & ROBINSON J.W.L. Glucose transport by brush-border membrane vesicles after proximal resection or ileo-jejunal transposition in the rat. 9

MICHEL C.C. *see* LEVICK J.R. & MICHEL C.C. The effects of position and skin temperature on the capillary pressures in the fingers and toes. 97

MITCHELL Donald E. *see* GIFFIN Fred & MITCHELL Donald E. The rate of recovery of vision after early monocular deprivation in kittens. 511

MOLLON J.D. *see* BOWMAKER J.K., DARTNALL H.J.A., LYTHGOE J.N. & MOLLON J.D. The visual pigments of rods and cones in the rhesus monkey, *Macaca mulatta*. 329

MURER H. *see* MENGE H., MURER H. & ROBINSON J.W.L. Glucose transport by brush-border membrane vesicles after proximal resection or ileo-jejunal transposition in the rat. 9

NARGEOT Joël *see* GARNIER Didier, NARGEOT Joël, OJEDA Carlos & ROUGIER Oger The action of acetylcholine on background conductance in frog atrial trabeculae. 381

OJEDA Carlos *see* GARNIER Didier, NARGEOT Joël, OJEDA Carlos & ROUGIER Oger The action of acetylcholine on background conductance in frog atrial trabeculae. 381

OWMAN Ch. *see* EDVINSSON L., HARDEBO J.E., MacKENZIE E.T. & OWMAN Ch. Effect of exogenous noradrenaline on local cerebral blood flow after osmotic opening of the blood–brain barrier in the rat. 149

PARSONS D.S. *see* BOYD C.A.R. & PARSONS D.S. Effects of vascular perfusion on the accumulation, distribution and transfer of 3-*O*-methyl-D-glucose within and across the small intestine. 17

PAUPARDIN-TRITSCH Danièle *see* GERSCHENFELD H. M., HAMON M. & PAUPARDIN-TRITSCH Danièle Release of endogenous serotonin from two identified serotonin-containing neurones and the physiological role of serotonin re-uptake. 265

PERDOMO J.M. *see* CURTIS K.J., KIM Y.S., PERDOMO J.M., SILK D.B.A. & WHITEHEAD J.S. Protein digestion and absorption in the rat. 409

PETERSEN D.H. *see* IWATSUKI N. & PETERSEN D.H. Pancreatic acinar cells: acetylcholine-evoked electrical uncoupling and its ionic dependency. 81

PETTIGREW John D. *see* BLASDEL Gary G. & PETTIGREW John D. Effect of prior visual experience on cortical recovery from the effects of unilateral eyelid suture in kittens. 601

PONTE J. & PURVES M.J. Carbon dioxide and venous return and their interaction as stimuli to ventilation in the cat. 455

PRATT O.E. *see* DANIEL P.M., LOVE E.R. & PRATT O.E. The effect of age upon the influx of glucose into the brain. 141

PURVES M.J. *see* PONTE J. & PURVES M.J. Carbon dioxide and venous return and their interaction as stimuli to ventilation in the cat. 455

REED J.D. *see* ALBINUS Margitta, BLAIR E.L., HIRST B.H. & REED J.D. The effect of anaesthesia on pentagastrin stimulated gastric acid secretion in the cat. 1

REGAN D. *see* CYNADER Max & REGAN D. Neurones in cat parastriate cortex sensitive to the direction of motion in three-dimensional space. 549

RHOADES Robert W. *see* CHALUPA Leo M. & RHOADES Robert W. Modification of visual response properties in the superior colliculus of the golden hamster following stroboscopic rearing. 571

RINK T.J. *see* HLADKY S.B. & RINK T.J. Osmotic behaviour of human red blood cells: an interpretation in terms of negative intracellular fluid pressure. 437

RITCHIE J.M. & STRAUB R. W. Increase in efflux of inorganic phosphate during electrical activity in small non-myelinated nerve fibres. 539

ROBINSON J.W.L. *see* MENGE H., MURER H. & ROBINSON J.W.L. Glucose transport by brush-border membrane vesicles after proximal resection or ileo-jejunal transposition in the rat. 9

ROSS W.N. & STUART Ann E. Voltage sensitive calcium channels in the presynaptic terminals of a decrementally conducting photoreceptor. 173

ROUGIER Oger *see* GARNIER Didier, NARGEOT Joël, OJEDA Carlos & ROUGIER Oger The action of acetylcholine on background conductance in frog atrial trabeculae. 381

RUBIN R.P. *see* HARADA E. & RUBIN R.P. Stimulation of renin secretion and calcium efflux from the isolated perfused cat kidney by noradrenaline after prolonged calcium deprivation. 367

SATO Fusako & SATO Kenzo Secretion of a potassium-rich fluid by the secretory coil of the rat paw eccrine sweat gland. 37

SATO Kenzo *see* SATO Fusako & SATO Kenzo Secretion of a potassium-rich fluid by the secretory coil of the rat paw eccrine sweat gland. 37

SILINSKY E.M. On the role of barium in supporting the asynchronous release of acetylcholine quanta by motor nerve impulses. 157

SILK D.B.A. *see* CURTIS K.J., KIM Y.S., PERDOMO J.M., SILK D.B.A. & WHITEHEAD J.S. Protein digestion and absorption in the rat. 409

SNART R.S. & TAYLOR Elizabeth Aldosterone effects on renal metabolism. 447

STRAUB R. W. *see* RITCHIE J.M. & STRAUB R. W. Increase in efflux of inorganic phosphate during electrical activity in small non-myelinated nerve fibres. 539

STUART Ann E. *see* ROSS W.N. & STUART Ann E. Voltage sensitive calcium channels in the presynaptic terminals of a decrementally conducting photoreceptor. 173

SUNDLÖF G. & WALLIN B.G. Human muscle nerve sympathetic activity at rest. Relationship to blood pressure and age. 621

TAYLOR Elizabeth *see* SNART R.S. & TAYLOR Elizabeth Aldosterone effects on renal metabolism. 447

TRAUTWEIN W. *see* McDONALD T.F. & TRAUTWEIN W. Membrane currents in cat myocardium: separation of inward and outward components. 193

VAN HELDEN Dirk *see* GAGE Peter W., McBURNEY Robert N. & VAN HELDEN Dirk Octanol reduces end-plate channel lifetime. 279

WALLIN B.G. *see* SUNDLÖF G. & WALLIN B.G. Human muscle nerve sympathetic activity at rest. Relationship to blood pressure and age. 621

WESTBURY D.R. *see* BROKENSHA G. & WESTBURY D.R. Modification by previous afferent discharge of the adaptation of frog muscle spindles following an extension. 397

WHITEHEAD J.S. *see* CURTIS K.J., KIM Y.S., PERDOMO J.M., SILK D.B.A. & WHITEHEAD J.S. Protein digestion and absorption in the rat. 409

WIRTH J.B. *see* FITZSIMONS J.T. & WIRTH J.B. The renin-angiotensin system and sodium appetite. 63

YIP J. W. *see* DENNIS M.J. & YIP J. W. Formation and elimination of foreign synapses on adult salamander muscle. 299

ZAPATA P. *see* LLADOS F. & ZAPATA P. Effects of dopamine analogues and antagonists on carotid body chemosensors *in situ*. 487

ZAPATA P. *see* LLADOS F. & ZAPATA P. Effects of adrenoceptor stimulating and blocking agents on carotid body chemosensory inhibition. 501

CONTENTS OF VOLUME 275

February 1978

HARTMANN P.E. & KULSKI J.K. Changes in the composition of the mammary secretion of women after abrupt termination of breast feeding. 1

WONG P.Y.D. & YEUNG C.H. Absorptive and secretory functions of the perfused rat cauda epididymis. 13

DEMOL P. & SARLES H. Action of fatty acids on the exocrine pancreatic secretion of the conscious rat: further evidence for a protein pancreatic inhibitory factor. 27

BURSTYN Peter G.R. Sodium and water metabolism under the influence of prolactin, aldosterone, and antidiuretic hormone. 39

LAMBERT Ann & LOWE A.G. Chloride/bicarbonate exchange in human erythrocytes. 51

BRADING Alison F. Calcium-induced increase in membrane permeability in the guinea-pig taenia coli: evidence for involvement of a sodium–calcium exchange mechanism. 65

HALPERN W., MULVANY M.J. & WARSHAW D.M. Mechanical properties of smooth muscle cells in the walls of arterial resistance vessels. 85

KIRKWOOD P.A. & SEARS T.A. The synaptic connexions to intercostal motoneurones as revealed by the average common excitation potential. 103

PICKLES Hilary G. & SIMMONDS M.A. Field potentials, inhibition and the effect of pentobarbitone in the rat olfactory cortex slice. 135

BARKER D., BESSOU P., JANKOWSKA Elżbieta, PAGÈS B. & STACEY M.J. Identification of intrafusal muscle fibres activated by single fusimotor axons and injected with fluorescent dye in cat tenuissimus spindles. 149

JOHANSON Conrad E. & WOODBURY Dixon M. Uptake of [^{14}C]urea by the *in vivo* choroid plexus–cerebrospinal fluid–brain system: identification of sites of molecular sieving. 167

ORCHARDSON R. The generation of nerve impulses in mammalian axons by changing the concentrations of the normal constituents of extracellular fluid. 177

BULAT M. & ZIVKOVIĆ B. Exchange of 5-hydroxyindoleacetic acid between the spinal cord and lumbar cerebrospinal fluid. 191

KRNJEVIĆ K., PUIL E. & WERMAN R. EGTA and motoneuronal after-potentials. 199

KRNJEVIĆ K., PUIL E. & WERMAN R. Significance of 2,4-dinitrophenol action on spinal motoneurones. 225

MOISESCU D.G. & THIELECZEK R. Calcium and strontium concentration changes within skinned muscle preparations following a change in the external bathing solution. 241

GALLAGHER J.P., HIGASHI H. & NISHI S. Characterization and ionic basis of GABA-induced depolarizations recorded *in vitro* from cat primary afferent neurones. 263

GUSTAFSSON B., LINDSTRÖM S. & TAKATA M. Afterhyperpolarization mechanism in the dorsal spinocerebellar tract cells of the cat. 283

GUSTAFSSON B. & ZANGGER P. Effect of repetitive activation on the afterhyperpolarization in dorsal spinocerebellar tract neurones. 303

GUSTAFSSON B., LINDSTRÖM S. & ZANGGER P. Firing behaviour of dorsal spinocerebellar tract neurones. 321

GORMAN A.L.F. & MCREYNOLDS John S. Ionic effects on the membrane potential of hyperpolarizing photoreceptor in scallop retina. 345

GORMAN A.L.F. & THOMAS M.V. Changes in the intracellular concentration of free calcium ions in a pace-maker neurone, measured with metallochromic indicator dye arsenazo III. 357

ANDERSON E.I. & FISCHBARG J. Biphasic effects of insulin and ouabain on fluid transport across rabbit corneal endothelium. 377

LØMO T. & SLATER C.R. Control of acetylcholine sensitivity and synapse formation by muscle activity. 391

FISCHBARG J. & WHITTEMBURY G. The effect of external pH on osmotic permeability, ion and fluid transport across isolated frog skin. 403

BERTRAND D., FUORTES M.G.F. & POCHOBRADSKY J. Actions of EGTA and high calcium on the cones in the turtle retina. 419

BANET Manuel, HENSEL Herbert & POTHMANN Brigitte Autonomic thermoregulation after intermittent cooling of the spinal cord and cold exposure in the rat. 439

MACDONALD J.F. & NISTRI A. A comparison of the action of glutamate, ibotenate and other related amino acids on feline spinal interneurones. 449

BISHOP J.H.V., ELEGBE R., GREEN R. & THOMAS S. Effects of phlorizin on glucose, water and sodium handling by the rat kidney. 467

BISHOP J.H.V., GREEN R. & THOMAS S. Effects of glucose on water and sodium reabsorption in the proximal convoluted tubule of rat kidney. 481

HAMMER Marie G. & SHERIDAN J.D. Electrical coupling and dye transfer between acinar cells in rat salivary glands. 495

IWATSUKI N. & PETERSEN O.H. Membrane potential, resistance, and intracellular communication in the lacrimal gland: effects of acetylcholine and adrenaline. 507

BANKS Robert O. & KLEINMAN Leonard I. Effect of amiloride on the renal response to saline expansion in new-born dogs. 521

SCHOLFIELD C.N. Electrical properties of neurones in the olfactory cortex slice *in vitro*. 535

SCHOLFIELD C.N. A depolarizing inhibitory potential in neurones of the olfactory cortex *in vitro*. 547

SCHOLFIELD C.N. A barbiturate induced intensification of the inhibitory potential in slices of guinea-pig olfactory cortex. 559

BARNES R.J., COMLINE R.S. & SILVER Marian Effect of cortisol in liver glycogen concentrations in hypophysectomized, adrenalectomized and normal foetal lambs during late or prolonged gestation. 567

PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY

4–5 November 1977

DEMONSTRATIONS

Hems D.A., Kirk C.J. & Whitton P.D. The use of the perfused liver or hepatocyte suspensions for the study of hepatic function. 1*P*

Horn G. & McCabe B.J. An autoradiographic method for studying the incorporation of uracil into acid-insoluble compounds in the brain. 2*P*

Wood N.A.P. A inexpensive, simple and robust O_2-electrode. 3*P*

Moncada S., Salmon J.A., Vane J.R. & Whittle B.J.R. Formation of prostacyclin and its product 6-oxo-$PGF_{1\alpha}$ by the gastric mucosa of several species. 4*P*

Cardinal D.C. & Higgs G.A. A photometric device for measuring blood vessel diameter in the microcirculation. 5*P*

Faulkner D.J. A new television visual stimulator for contrast sensitivity and evoked response testing. 7*P*

McGarrick J.D., Reynolds J.M. & Thexton A.J. Apparatus for the application of controlled mechanical stimuli intraorally in man and its experimental use. 8*P*

McGarrick J. & Thexton A. Computer-aided analysis of jaw and hyoid movement. 9*P*

Daniel P.M. & Henderson J.R. Circulation in the islets of Langerhans. 10*P*

Hall R.L. Gas–liquid chromatographic determination of the carbohydrate content of tracheal mucus samples. 11*P*

Balfre Kim & Richardson P.S. Measurement of tracheal mucin secretion and potential difference in the chicken *in vitro*. 12*P*

Davies A., Dixon M., Widdicombe J.G. & Wise J.C.M. Lung stretch receptor paralysis by sulphur dioxide. 13*P*

Davies A. & Roumy M. The inspiratory augmenting effect of lung irritant receptor activity. 14*P*

Al-Ugaily Layla H. & Pack R.J. The use of an antibody staining technique to demonstrate exogenous antigens in guinea-pig trachea. 15*P*

Perkins M.N. & Whitehead S.A. Electrophysiology of medial forebrain bundle connections with preoptic anterior hypothalamic neurones. 16*P*

Banks R.V., Campbell F.W. & Hood C. A neurophysiological approach to the treatment of amblyopia. 16*P*

Eley C., Griffiths C., McGarrick J. & Thexton A. A method for studying excitability changes in the oral reflexes of the decerebrate rat. 17*P*

Dormandy J.A., Flute P.T., Prymak-Michelinaki S.M. & Reid H. Erythrocyte deformability and blood viscosity in peripheral circulatory disease. 19*P*

Fraher J. Developmental changes in the ventral root-spinal cord junction. 20*P*

Collier J.G. & Daly Susan A new method for studying the behaviour of superficial limb veins of the dog. 21*P*

Davies A. & Wise J.C.M. A simple method for measuring sulphur dioxide concentration in air. 21*P*

COMMUNICATIONS

Munday K.A., Noble A.R. & Rowe B.P. Actions of α-, β- and ganglion-blockade on the pressor responses to angiotensin I and II in the conscious rabbit. 21*P*

Nicholson A.N. & Stone Barbara M. Adaptation of sleep to British Summer Time. 22*P*

Levin R.J. & Wagner G. Haemodynamic changes of the human vagina during sexual arousal assessed by heated oxygen electrode. 23*P*

Chapman B.J., Horn N.M. & Robertson M.J. Dopamine induced vasodilatation in the rat kidney. 24*P*

Wilcox C.S. Renin release from the dog's kidney during hypermagnesaemia. 25P

Law R.O. The influence of external chloride concentration on the volume of renal medullary cells in hyperosmolal media. 26P

Helle Karen B. & Serck-Hanssen Guldborg Differential release of noradrenaline, adrenaline and dopamine-β-hydroxylase from the bovine adrenal. 27P

Griffiths E.C., Jeffcoate S.L., Thorne Joanna & White Nicki Age-dependent changes in serum inactivation of thyrotrophine-releasing hormone in rat and human. 28P

Findlay A.L.R., Fitzsimons J.T. & Kucharczyk J. Angiotensin-induced drinking fluctuates with the oestrous cycle. 29P

Higgs G.A., Moncada S. & Vane J.R. Prostacyclin is a potent dilator of arterioles in the hamster cheek pouch. 30P

Mortola J.P. & Sant'Ambrogio G. Mechanics of the trachea and behaviour of its stretch receptors. 31P

Bainton C.R., Kirkwood P.A. & Sears T.A. Relationship between tonic and rhythmic respiratory activities. 32P

Gardner W.N. The pattern of the human respiratory response to step change of P_{A,O_2}. 33P

Howe A., Morgan Miriam & Pack R.J. A comparison of the ultrastructure of the abdominal vagal paraganglia and similar tissues in the rat. 34P

Jeffery P.K., Korpas J. & Widdicombe J.G. Intraepithelial nerve fibres of the cat larynx and the expiration reflex. 35P

Gallagher J.T., Hall R.L., Jeffery P.K., Phipps R.J. & Richardson P.S. The nature and origin of tracheal secretions released in response to pilocarpine and ammonia. 36P

Bergel D.H., Brooks D.E., MacDermott A.J., Robinson J.L. & Sleight P. Baroreceptor firing frequency and activation of carotid sinus vascular smooth muscle in dogs. 37P

Angell-James Jennifer E. & George M.J. Carotid sinus baroreceptor reflex and baroreflex control of the circulation in experimental cardiovascular disease. 38P

Davies A. The effect of irritant receptor activity on expiratory time. 39P

Harding R., Johnson P., McClelland M.E., McLeod C.N., Whyte P.L. & Wilkinson A.R. Respiratory and cardiovascular responses to feeding in lambs. 40P

Daniel P.M., Pratt O.E. & Spargo E. Storage and homoeostatic functions of the skeletal muscles in muscular dystrophy. 41P

Roberts M.H.T. & Wright D.M. Effect of dorsal rhizotomy on neuronal responses to two putative neurotransmitters of primary afferent neurones. 42P

Lindsay K.W. & Rosenberg J.R. Tonic labyrinth reflexes in the forelimb of the acute and chronic hemilabyrinthectomized cat. 43P

Aitken S.C. & Lal S. Dorsal horn neurones responding to controlled mechanical stimulation of the rabbit skin. 44P

Stone T.W. & Taylor D.A. Interactions of 5'AMP and 5'GMP with neuronal responses to noradrenaline in the cerebral cortex of rats. 45P

Clarke R.J. & Ikeda Hisako Properties of neurones in the nucleus of the optic tract of the pretectum in the cat. 46P

Marsden C.D., Merton P.A. & Morton H.B. Anticipatory postural responses in the human subject. 47P

Hughes C.M. & Vergara Graciela Phospholipids in lung surfactant of *Rana pipiens*. 48P

McCance R.A. & Wilkinson A.W. Increase in length and weight of the gut after by-passing the jejunum or the jejunum and half the ileum in suckling pigs. 49P

Buchanan K.D., Conlon J.M., Harper A.A., Hood A.J.C., Murphy R.F., Mushens J. & Smy J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50P

Bassett J.M., Hunziker V. & Madill D. Glycine and alanine regulation of glucagon secretion in foetal and post-natal lambs. 51P

Canfield S.P., Curwain B.P., Phillips Jean & Price Carolyn Acid secretion without changes in mucosal cyclic nucleotides in the guinea-pig stomach. 52P

ANDREWS P.L.R. & BOWER A.J. Simultaneous measurement of gastric secretion and motility in response to various stimuli in the ferret. 53P

ALVEAR J. & BROOKE O.G. Specific dynamic action in infants of low birth weight. 54P

BEEVOR Shirley, BELOFF-CHAIN Anne, DONALDSON Amanda & EDWARDSON J.A. Pituitary intermediate lobe function in genetically obese (*ob/ob*) and lean mice. 55P

MCMAHON S.B. & MORRISON J.F.B. Convergence of visceral and somatic axons on neurones which ascend in the lateral funiculus of the cat. 56P

FELDBERG W. & WEI E. Central sites at which morphine acts when producing cardiovascular effects. 57P

BOWERY N.G. & NEAL M.J. Differential effect of veratridine and potassium depolarization on [^{3}H]GABA release from neurones and glia. 58P

JEFFEREYS D.A. Evoked potential evidence for contour-abstraction in prestriate cortex. 59P

ALBANO Janet, BHOOLA K.D. & HARVEY R.F. The effect of substance P on cyclic AMP and cyclic GMP levels in actively secreting pancreatic lobules. 60P

LARGE W.A. & RANG H.P. Incorporation of acetylmonoethylcholine into the transmitter pool at the mammalian neuromuscular junction. 61P

ELLORY J.C. & WILLIS J.S. Temperature dependence of the cation affinities of the sodium pump in red cells from hibernators and non-hibernators. 62P

ALLEN D.G. Shortening of tetanized skeletal muscle causes a fall of intracellular calcium concentration. 63P

HAMMOND P. On the use of nitrous oxide/oxygen mixtures for anaesthesia in cats. 64P

REYNOLDS J.M. & THEXTON A.J. The effect upon the masseteric electromyogram of double mechanical stimuli applied to teeth. 65P

GARDNER-MEDWIN A.R. & NICHOLSON C. Measurements of extracellular potassium and calcium concentration during passage of current across the surface of the brain. 66P

LORD Marilyn Phase lags between e.m.g. and flexion during voluntary oscillatory motion of the elbow. 67P

DEAKIN J.F.W., DOSTROVSKY J.O. & LONGDEN A. The role of periaqueductal grey matter and of spinal serotonergic pathways in morphine analgesia. 67P

EAGLESOM C.C. & ZEITLIN I.J. Studies on the mediation of the atropine-resistant response to neurostimulation of the guinea-pig distal colon. 68P

BATESON P.P.G., HORN G. & MCCABE B.J. Imprinting and the incorporation of uracil in the chick brain: a radioautographic study. 70P

WALL P.D. The properties of substantia gelatinosa units. 71P

MERRILL E.G. & YAKSH T.L. Properties of cerebellum parallel fibres and the Lissauer tract of the cat. 71P

PAPAKOSTOPOULOS D. A precentral macropotential with short latency as a possible indicator of response reafferent activity in man. 72P

SLATER C.R. & WOLFE A.F.R. Abnormal reinnervation of muscles in dystrophic mice. 73P

EDWARDSON J.A. & HOUGH C.A.M. An immunological model of the sweet-taste receptor. 74P

NAYLER Winifred G., POOLE-WILSON P.A. & WILLIAMS A. Ouabain-induced contractures in mammalian heart muscle. 75P

BENNETT B., MACKIE M. & OGSTON D. Properties of plasma plasminogen activators. 76P

BENNETT D., GOLDSTEIN R. & LEACH G. Echo cardiographic left ventricular dimensions in the supine and upright positions and on upright exercise in normal subjects. 77P

ROUMY M. The structure of the augmented breath. 77P

GUERTZENSTEIN P.G., HILTON S.M., MARSHALL J.M. & TIMMS R.J. Experiments on the origin of vasomotor tone. 78P

DIXON M., JACKSON D.M., RICHARDS I.M. & VENDY K. The effects of acetylcholine and histamine on total lung resistance, dynamic lung compliance and lung irritant receptor discharge in the anaesthetized dog. 79P

BALFRE Kim The effects of calcium and calcium ionophore A23187 on mucin secretion and potential difference in the isolated chicken trachea. 80P

Branston N.M., Strong A.J. & Symon L. Impedance related to local blood flow in cerebral cortex. 81*P*

Levick J.R. Fluid transport across synovial tissue *in vivo*. 83*P*

Clay T.P. & Hughes J.M.B. Humoral mediation of bronchoconstriction following pulmonary microembolism in the guinea-pig. 84*P*

Ashton I., Cotes J.E., Holland P., Johnson G.R., Legg S.J., Saunders M.J. & White R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

Mei N. Modes of activation of intestinal receptors. 86*P*

Budzinska Krystyna, Karczewski W.A., Naslonska Elzbieta, Romaniuk J.R. & Ryba M. The ability of the respiratory complex to memorise previous events 86*P*

AUTHOR INDEX

(D) Denotes Demonstration (T) Title only

AITKEN S.C. & LAL S. Dorsal horn neurones responding to controlled mechanical stimulation of the rabbit skin. 44*P*

ALBANO Janet, BHOOLA K.D. & HARVEY R.F. The effect of substance P on cyclic AMP and cyclic GMP levels in actively secreting pancreatic lobules. 60*P*

ALLEN D.G. Shortening of tetanized skeletal muscle causes a fall of intracellular calcium concentration. 63*P*

AL-UGAILY Layla H. & PACK R.J. The use of an antibody staining technique to demonstrate exogenous antigens in guinea-pig trachea. (D) 15*P*

ALVEAR J. & BROOKE O.G. Specific dynamic action in infants of low birth weight. 54*P*

ANDERSON E.I. & FISCHBARG J. Biphasic effects of insulin and ouabain on fluid transport across rabbit corneal endothelium. 377

ANDREWS P.L.R. & BOWER A.J. Simultaneous measurement of gastric secretion and motility in response to various stimuli in the ferret. 53*P*

ANGELL-JAMES Jennifer E. & GEORGE M.J. Carotid sinus baroreceptor reflex and baroreflex control of the circulation in experimental cardiovascular disease. 38*P*

ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

BAINTON C.R., KIRKWOOD P.A. & SEARS T.A. Relationship between tonic and rhythmic respiratory activities. 32*P*

BALFRE Kim & RICHARDSON P.S. Measurement of tracheal mucin secretion and potential difference in the chicken *in vitro*. (D) 12*P*

BALFRE Kim The effects of calcium and calcium ionophore A23187 on mucin secretion and potential difference in the isolated chicken trachea. 80*P*

BANET Manuel, HENSEL Herbert & POTHMANN Brigitte Autonomic thermoregulation after intermittent cooling of the spinal cord and cold exposure in the rat. 439

BANKS Robert O. & KLEINMAN Leonard I. Effect of amiloride on the renal response to saline expansion in new-born dogs. 521

BANKS R.V., CAMPBELL F.W. & HOOD C. A neurophysiological approach to the treatment of amblyopia. (D) 16*P*

BARKER D., BESSOU P., JANKOWSKA Elżbieta, PAGÈS B. & STACEY M.J. Identification of intrafusal muscle fibres activated by single fusimotor axons and injected with fluorescent dye in cat tenuissimus spindles. 149

BARNES R.J., COMLINE R.S. & SILVER Marian Effect of cortisol in liver glycogen concentrations in hypophysectomized, adrenalectomized and normal foetal lambs during late or prolonged gestation. 567

BASSETT J.M., HUNZIKER V. & MADILL D. Glycine and alanine regulation of glucagon secretion in foetal and post-natal lambs. 51*P*

BATESON P.P.G., HORN G. & McCABE B.J. Imprinting and the incorporation of uracil in the chick brain: a radioautographic study. 70*P*

BEEVOR Shirley, BELOFF-CHAIN Anne, DONALDSON Amanda & EDWARDSON J.A. Pituitary intermediate lobe function in genetically obese (*ob*/*ob*) and lean mice. 55*P*

BELOFF-CHAIN Anne *see* BEEVOR Shirley, BELOFF-CHAIN Anne, DONALDSON Amanda & EDWARDSON J.A. Pituitary intermediate lobe function in genetically obese (*ob*/*ob*) and lean mice. 55*P*

BENNETT B., MACKIE M. & OGSTON D. Properties of plasma plasminogen activators. 76*P*

BENNETT D., GOLDSTEIN R. & LEACH G. Echo cardiographic left ventricular dimensions in the supine and upright positions and on upright exercise in normal subjects. 77*P*

BERGEL D.H., BROOKS D.E., MacDERMOTT A.J., ROBINSON J.L. & SLEIGHT P. Baroreceptor firing frequency and activation of carotid sinus vascular smooth muscle in dogs. 37*P*

BERTRAND D., FUORTES M.G.F. & POCHOBRADSKY J. Actions of EGTA and high calcium on the cones in the turtle retina. 419

BESSOU P. *see* BARKER D., BESSOU P., JANKOWSKA Elżbieta, PAGÈS B. & STACEY M.J. Identification of intrafusal muscle fibres activated by single fusimotor axons and injected with fluorescent dye in cat tenuissimus spindles. 149

BHOOLA K.D. *see* ALBANO Janet, BHOOLA K.D. & HARVEY R.F. The effect of substance P on cyclic AMP and cyclic GMP levels in actively secreting pancreatic lobules. 60*P*

BISHOP J.H.V., ELEGBE R., GREEN R. & THOMAS S. Effects of phlorizin on glucose, water and sodium handling by the rat kidney. 467

BISHOP J.H.V., GREEN R. & THOMAS S. Effects of glucose on water and sodium reabsorption in the proximal convoluted tubule of rat kidney. 481

BOWER A.J. *see* ANDREWS P.L.R. & BOWER A.J. Simultaneous measurement of gastric secretion and motility in response to various stimuli in the ferret. 53*P*

BOWERY N.G. & NEAL M.J. Differential effect of veratridine and potassium depolarization on [^{3}H]GABA release from neurones and glia. 58*P*

BRADING Alison F. Calcium-induced increase in membrane permeability in the guinea-pig taenia coli: evidence for involvement of a sodium–calcium exchange mechanism. 65

BRANSTON N.M., STRONG A.J. & SYMON L. Impedance related to local blood flow in cerebral cortex. 81*P*

BROOKE O.G. *see* ALVEAR J. & BROOKE O.G. Specific dynamic action in infants of low birth weight. 54*P*

BROOKS D.E. *see* BERGEL D.H., BROOKS D.E., MacDERMOTT A.J., ROBINSON J.L. & SLEIGHT P. Baroreceptor firing frequency and activation of carotid sinus vascular smooth muscle in dogs. 37*P*

BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50*P*

BUDZINSKA Krystyna, KARCZEWSKI W.A., NASLONSKA Elzbieta, ROMANIUK J.R. & RYBA M. The ability of the respiratory complex to memorise previous events (T) 86*P*

BULAT M. & ZIVKOVIĆ B. Exchange of 5-hydroxyindoleacetic acid between the spinal cord and lumbar cerebrospinal fluid. 191

BURSTYN Peter G.R. Sodium and water metabolism under the influence of prolactin, aldosterone, and antidiuretic hormone. 39

CAMPBELL F.W. *see* BANKS R.V., CAMPBELL F.W. & HOOD C. A neurophysiological approach to the treatment of amblyopia. (D) 16*P*

CANFIELD S.P., CURWAIN B.P., PHILLIPS Jean & PRICE Carolyn Acid secretion without changes in mucosal cyclic nucleotides in the guinea-pig stomach. 52*P*

CARDINAL D.C. & HIGGS G.A. A photometric device for measuring blood vessel diameter in the microcirculation. (D) 5*P*

CHAPMAN B.J., HORN N.M. & ROBERTSON M.J. Dopamine induced vasodilatation in the rat kidney. 24*P*

CLARKE R.J. & IKEDA Hisako Properties of neurones in the nucleus of the optic tract of the pretectum in the cat. 46*P*

CLAY T.P. & HUGHES J.M.B. Humoral mediation of bronchoconstriction following pulmonary microembolism in the guinea-pig. 84*P*

COLLIER J.G. & DALY Susan A new method for studying the behaviour of superficial limb veins of the dog. (D) (T) 21*P*

COMLINE R.S. *see* BARNES R.J., COMLINE R.S. & SILVER Marian Effect of cortisol in liver glycogen concentrations in hypophysectomized, adrenalectomized and normal foetal lambs during late or prolonged gestation. 567

CONLON J.M. *see* BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50*P*

COTES J.E. *see* ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

CURWAIN B.P. *see* CANFIELD S.P., CURWAIN B.P., PHILLIPS Jean & PRICE Carolyn Acid secretion without changes in mucosal cyclic nucleotides in the guinea-pig stomach. 52*P*

DALY Susan *see* COLLIER J.G. & DALY Susan A new method for studying the behaviour of superficial limb veins of the dog. (D) (T) 21*P*

DANIEL P.M. & HENDERSON J.R. Circulation in the islets of Langerhans. (D) 10*P*

DANIEL P.M., PRATT O.E. & SPARGO E. Storage and homoeostatic functions of the skeletal muscles in muscular dystrophy. 41*P*

DAVIES A., DIXON M., WIDDICOMBE J.G. & WISE J.C.M. Lung stretch receptor paralysis by sulphur dioxide. (D) 13*P*

DAVIES A. & ROUMY M. The inspiratory augmenting effect of lung irritant receptor activity. (D) 14*P*

DAVIES A. & WISE J.C.M. A simple method for measuring sulphur dioxide concentration in air. (D) (T) 21*P*

DAVIES A. The effect of irritant receptor activity on expiratory time. 39*P*

DEAKIN J.F.W., DOSTROVSKY J.O. & LONGDEN A. The role of periaqueductal grey matter and of spinal serotonergic pathways in morphine analgesia. 67*P*

DEMOL P. & SARLES H. Action of fatty acids on the exocrine pancreatic secretion of the conscious rat: further evidence for a protein pancreatic inhibitory factor. 27

DIXON M. *see* DAVIES A., DIXON M., WIDDICOMBE J.G. & WISE J.C.M. Lung stretch receptor paralysis by sulphur dioxide. (D) 13*P*

DIXON M., JACKSON D.M., RICHARDS I.M. & VENDY K. The effects of acetylcholine and histamine on total lung resistance, dynamic lung compliance and lung irritant receptor discharge in the anaesthetized dog. 79*P*

DONALDSON Amanda *see* BEEVOR Shirley, BELOFF-CHAIN Anne, DONALDSON Amanda & EDWARDSON J.A. Pituitary intermediate lobe function in genetically obese (*ob*/*ob*) and lean mice. 55*P*

DORMANDY J.A., FLUTE P.T., PRYMAK-MICHELINAKI S.M. & REID H. Erythrocyte deformability and blood viscosity in peripheral circulatory disease. (D) 19*P*

DOSTROVSKY J.O. *see* DEAKIN J.F.W., DOSTROVSKY J.O. & LONGDEN A. The role of periaqueductal grey matter and of spinal serotonergic pathways in morphine analgesia. 67*P*

EAGLESOM C.C. & ZEITLIN I.J. Studies on the mediation of the atropine-resistant response to neurostimulation of the guinea-pig distal colon. 68*P*

EDWARDSON J.A. *see* BEEVOR Shirley, BELOFF-CHAIN Anne, DONALDSON Amanda & EDWARDSON J.A. Pituitary intermediate lobe function in genetically obese (*ob*/*ob*) and lean mice. 55*P*

EDWARDSON J.A. & HOUGH C.A.M. An immunological model of the sweet-taste receptor. 74*P*

ELEGBE R. *see* BISHOP J.H.V., ELEGBE R., GREEN R. & THOMAS S. Effects of phlorizin on glucose, water and sodium handling by the rat kidney. 467

ELEY C., GRIFFITHS C., MCGARRICK J. & THEXTON A. A method for studying excitability changes in the oral reflexes of the decerebrate rat. (D) 17*P*

ELLORY J.C. & WILLIS J.S. Temperature dependence of the cation affinities of the sodium pump in red cells from hibernators and non-hibernators. 62*P*

FAULKNER D.J. A new television visual stimulator for contrast sensitivity and evoked response testing. (D) 7*P*

FELDBERG W. & WEI E. Central sites at which morphine acts when producing cardiovascular effects. 57*P*

FINDLAY A.L.R., FITZSIMONS J.T. & KUCHARCZYK J. Angiotensin-induced drinking fluctuates with the oestrous cycle. 29*P*

FISCHBARG J. *see* ANDERSON E.I. & FISCHBARG J. Biphasic effects of insulin and ouabain on fluid transport across rabbit corneal endothelium. 377

FISCHBARG J. & WHITTEMBURY G. The effect of external pH on osmotic permeability, ion and fluid transport across isolated frog skin. 403

FITZSIMONS J.T. *see* FINDLAY A.L.R., FITZSIMONS J.T. & KUCHARCZYK J. Angiotensin-induced drinking fluctuates with the oestrous cycle. 29*P*

FLUTE P.T. *see* DORMANDY J.A., FLUTE P.T., PRYMAK-MICHELINAKI S.M. & REID H. Erythrocyte deformability and blood viscosity in peripheral circulatory disease. (D) 19*P*

FRAHER J. Developmental changes in the ventral root-spinal cord junction. (D) 20*P*

FUORTES M.G.F. *see* BERTRAND D., FUORTES M.G.F. & POCHOBRADSKY J. Actions of EGTA and high calcium on the cones in the turtle retina. 419

GALLAGHER J.P., HIGASHI H. & NISHI S. Characterization and ionic basis of GABA-induced depolarizations recorded *in vitro* from cat primary afferent neurones. 263

GALLAGHER J.T., HALL R.L., JEFFERY P.K., PHIPPS R.J. & RICHARDSON P.S. The nature and origin of tracheal secretions released in response to pilocarpine and ammonia. 36*P*

GARDNER-MEDWIN A.R. & NICHOLSON C. Measurements of extracellular potassium and calcium concentration during passage of current across the surface of the brain. 66*P*

GARDNER W.N. The pattern of the human respiratory response to step change of P_{A,O_2}. 33*P*

GEORGE M.J. *see* ANGELL-JAMES Jennifer E. & GEORGE M.J. Carotid sinus baroreceptor reflex and baroreflex control of the circulation in experimental cardiovascular disease. 38*P*

GOLDSTEIN R. *see* BENNETT D., GOLDSTEIN R. & LEACH G. Echo cardiographic left ventricular dimensions in the supine and upright positions and on upright exercise in normal subjects. 77*P*

GORMAN A.L.F. & MCREYNOLDS John S. Ionic effects on the membrane potential of hyperpolarizing photoreceptor in scallop retina. 345

GORMAN A.L.F. & THOMAS M.V. Changes in the intracellular concentration of free calcium ions in a pace-maker neurone, measured with metallochromic indicator dye arsenazo III. 357

GREEN R. *see* BISHOP J.H.V., ELEGBE R., GREEN R. & THOMAS S. Effects of phlorizin on glucose, water and sodium handling by the rat kidney. 467

GREEN R. *see* BISHOP J.H.V., GREEN R. & THOMAS S. Effects of glucose on water and sodium reabsorption in the proximal convoluted tubule of rat kidney. 481

GRIFFITHS C. *see* ELEY C., GRIFFITHS C., MCGARRICK J. & THEXTON A. A method for studying excitability changes in the oral reflexes of the decerebrate rat. (D) 17*P*

GRIFFITHS E.C., JEFFCOATE S.L., THORNE Joanna & WHITE Nicki Age-dependent changes in serum inactivation of thyrotrophine-releasing hormone in rat and human. 28*P*

GUERTZENSTEIN P.G., HILTON S.M., MARSHALL J.M. & TIMMS R.J. Experiments on the origin of vasomotor tone. 78*P*

GUSTAFSSON B., LINDSTRÖM S. & TAKATA M. Afterhyperpolarization mechanism in the dorsal spinocerebellar tract cells of the cat. 283

GUSTAFSSON B. & ZANGGER P. Effect of repetitive activation on the afterhyperpolarization in dorsal spinocerebellar tract neurones. 303

GUSTAFSSON B., LINDSTRÖM S. & ZANGGER P. Firing behaviour of dorsal spinocerebellar tract neurones. 321

HALL R.L. Gas–liquid chromatographic determination of the carbohydrate content of tracheal mucus samples. (D) 11*P*

HALL R.L. *see* GALLAGHER J.T., HALL R.L., JEFFERY P.K., PHIPPS R.J. & RICHARDSON P.S. The nature and origin of tracheal secretions released in response to pilocarpine and ammonia. 36*P*

HALPERN W., MULVANY M.J. & WARSHAW D.M. Mechanical properties of smooth muscle cells in the walls of arterial resistance vessels. 85

HAMMER Marie G. & SHERIDAN J.D. Electrical coupling and dye transfer between acinar cells in rat salivary glands. 495

HAMMOND P. On the use of nitrous oxide/oxygen mixtures for anaesthesia in cats. 64*P*

HARDING R., JOHNSON P., MCCLELLAND M.E., MCLEOD C.N., WHYTE P.L. & WILKINSON A.R. Respiratory and cardiovascular responses to feeding in lambs. 40*P*

HARPER A.A. *see* BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50*P*

HARTMANN P.E. & KULSKI J.K. Changes in the composition of the mammary secretion of women after abrupt termination of breast feeding. 1

HARVEY R.F. *see* ALBANO Janet, BHOOLA K.D. & HARVEY R.F. The effect of substance P on cyclic AMP and cyclic GMP levels in actively secreting pancreatic lobules. 60*P*

HELLE Karen B. & SERCK-HANSSEN Guldborg Differential release of noradrenaline, adrenaline and dopamine-β-hydroxylase from the bovine adrenal. 27*P*

HEMS D.A., KIRK C.J. & WHITTON P.D. The use of the perfused liver or hepatocyte suspensions for the study of hepatic function. (D) 1P

HENDERSON J.R. *see* DANIEL P.M. & HENDERSON J.R. Circulation in the islets of Langerhans. (D) 10P

HENSEL Herbert *see* BANET Manuel, HENSEL Herbert & POTHMANN Brigitte Autonomic thermoregulation after intermittent cooling of the spinal cord and cold exposure in the rat. 439

HIGASHI H. *see* GALLAGHER J.P., HIGASHI H. & NISHI S. Characterization and ionic basis of GABA-induced depolarizations recorded *in vitro* from cat primary afferent neurones. 263

HIGGS G.A. *see* CARDINAL D.C. & HIGGS G.A. A photometric device for measuring blood vessel diameter in the microcirculation. (D) 5P

HIGGS G.A., MONCADA S. & VANE J.R. Prostacyclin is a potent dilator of arterioles in the hamster cheek pouch. 30P

HILTON S.M. *see* GUERTZENSTEIN P.G., HILTON S.M., MARSHALL J.M. & TIMMS R.J. Experiments on the origin of vasomotor tone. 78P

HOLLAND P. *see* ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85P

HOOD A.J.C. *see* BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50P

HOOD C. *see* BANKS R.V., CAMPBELL F.W. & HOOD C. A neurophysiological approach to the treatment of amblyopia. (D) 16P

HORN G. & MCCABE B.J. An autoradiographic method for studying the incorporation of uracil into acid-insoluble compounds in the brain. (D) 2P

HORN G. *see* BATESON P.P.G., HORN G. & MCCABE B.J. Imprinting and the incorporation of uracil in the chick brain: a radioautographic study. 70P

HORN N.M. *see* CHAPMAN B.J., HORN N.M. & ROBERTSON M.J. Dopamine induced vasodilatation in the rat kidney. 24P

HOUGH C.A.M. *see* EDWARDSON J.A. & HOUGH C.A.M. An immunological model of the sweet-taste receptor. 74P

HOWE A., MORGAN Miriam & PACK R.J. A comparison of the ultrastructure of the abdominal vagal paraganglia and similar tissues in the rat. 34P

HUGHES C.M. & VERGARA Graciela Phospholipids in lung surfactant of *Rana pipiens*. 48P

HUGHES J.M.B. *see* CLAY T.P. & HUGHES J.M.B. Humoral mediation of bronchoconstriction following pulmonary microembolism in the guinea-pig. 84P

HUNZIKER V. *see* BASSETT J.M., HUNZIKER V. & MADILL D. Glycine and alanine regulation of glucagon secretion in foetal and post-natal lambs. 51P

IKEDA Hisako *see* CLARKE R.J. & IKEDA Hisako Properties of neurones in the nucleus of the optic tract of the pretectum in the cat. 46P

IWATSUKI N. & PETERSEN O.H. Membrane potential, resistance, and intracellular communication in the lacrimal gland: effects of acetylcholine and adrenaline. 507

JACKSON D.M. *see* DIXON M., JACKSON D.M., RICHARDS I.M. & VENDY K. The effects of acetylcholine and histamine on total lung resistance, dynamic lung compliance and lung irritant receptor discharge in the anaesthetized dog. 79P

JANKOWSKA Elżbieta *see* BARKER D., BESSOU P., JANKOWSKA Elżbieta, PAGÈS B. & STACEY M.J. Identification of intrafusal muscle fibres activated by single fusimotor axons and injected with fluorescent dye in cat tenuissimus spindles. 149

JEFFCOATE S.L. *see* GRIFFITHS E.C., JEFFCOATE S.L., THORNE Joanna & WHITE Nicki Age-dependent changes in serum inactivation of thyrotrophine-releasing hormone in rat and human. 28P

JEFFEREYS D.A. Evoked potential evidence for contour-abstraction in prestriate cortex. 59P

JEFFERY P.K., KORPAS J. & WIDDICOMBE J.G. Intraepithelial nerve fibres of the cat larynx and the expiration reflex. 35P

JEFFERY P.K. *see* GALLAGHER J.T., HALL R.L., JEFFERY P.K., PHIPPS R.J. & RICHARDSON P.S. The nature and origin of tracheal secretions released in response to pilocarpine and ammonia. 36P

JOHANSON Conrad E. & WOODBURY Dixon M. Uptake of [^{14}C]urea by the *in vivo* choroid plexus–cerebrospinal fluid–brain system: identification of sites of molecular sieving. 167

JOHNSON G.R. *see* ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

JOHNSON P. *see* HARDING R., JOHNSON P., MCCLELLAND M.E., MCLEOD C.N., WHYTE P.L. & WILKINSON A.R. Respiratory and cardiovascular responses to feeding in lambs. 40*P*

KARCZEWSKI W.A. *see* BUDZINSKA Krystyna, KARCZEWSKI W.A., NASLONSKA Elzbieta, ROMANIUK J.R. & RYBA M. The ability of the respiratory complex to memorise previous events (T) 86*P*

KIRK C.J. *see* HEMS D.A., KIRK C.J. & WHITTON P.D. The use of the perfused liver or hepatocyte suspensions for the study of hepatic function. (D) 1*P*

KIRKWOOD P.A. & SEARS T.A. The synaptic connexions to intercostal motoneurones as revealed by the average common excitation potential. 103

KIRKWOOD P.A. *see* BAINTON C.R., KIRKWOOD P.A. & SEARS T.A. Relationship between tonic and rhythmic respiratory activities. 32*P*

KLEINMAN Leonard I. *see* BANKS Robert O. & KLEINMAN Leonard I. Effect of amiloride on the renal response to saline expansion in new-born dogs. 521

KORPAS J. *see* JEFFERY P.K., KORPAS J. & WIDDICOMBE J.G. Intraepithelial nerve fibres of the cat larynx and the expiration reflex. 35*P*

KRNJEVIĆ K., PUIL E. & WERMAN R. EGTA and motoneuronal after-potentials. 199

KRNJEVIĆ K., PUIL E. & WERMAN R. Significance of 2,4-dinitrophenol action on spinal motoneurones. 225

KUCHARCZYK J. *see* FINDLAY A.L.R., FITZSIMONS J.T. & KUCHARCZYK J. Angiotensin-induced drinking fluctuates with the oestrous cycle. 29*P*

KULSKI J.K. *see* HARTMANN P.E. & KULSKI J.K. Changes in the composition of the mammary secretion of women after abrupt termination of breast feeding. 1

LAL S. *see* AITKEN S.C. & LAL S. Dorsal horn neurones responding to controlled mechanical stimulation of the rabbit skin. 44*P*

LAMBERT Ann & LOWE A.G. Chloride/bicarbonate exchange in human erythrocytes. 51

LARGE W.A. & RANG H.P. Incorporation of acetylmonoethylcholine into the transmitter pool at the mammalian neuromuscular junction. 61*P*

LAW R.O. The influence of external chloride concentration on the volume of renal medullary cells in hyperosmolal media. 26*P*

LEACH G. *see* BENNETT D., GOLDSTEIN R. & LEACH G. Echo cardiographic left ventricular dimensions in the supine and upright positions and on upright exercise in normal subjects. 77*P*

LEGG S.J. *see* ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

LEVICK J.R. Fluid transport across synovial tissue *in vivo*. 83*P*

LEVIN R.J. & WAGNER G. Haemodynamic changes of the human vagina during sexual arousal assessed by heated oxygen electrode. 23*P*

LINDSAY K.W. & ROSENBERG J.R. Tonic labyrinth reflexes in the forelimb of the acute and chronic hemilabyrinthectomized cat. 43*P*

LINDSTRÖM S. *see* GUSTAFSSON B., LINDSTRÖM S. & TAKATA M. Afterhyperpolarization mechanism in the dorsal spinocerebellar tract cells of the cat. 283

LINDSTRÖM S. *see* GUSTAFSSON B., LINDSTRÖM S. & ZANGGER P. Firing behaviour of dorsal spinocerebellar tract neurones. 321

LONGDEN A. *see* DEAKIN J.F.W., DOSTROVSKY J.O. & LONGDEN A. The role of periaqueductal grey matter and of spinal serotonergic pathways in morphine analgesia. 67*P*

LORD Marilyn Phase lags between e.m.g. and flexion during voluntary oscillatory motion of the elbow. 67*P*

LOWE A.G. *see* LAMBERT Ann & LOWE A.G. Chloride/bicarbonate exchange in human erythrocytes. 51

LØMO T. & SLATER C.R. Control of acetylcholine sensitivity and synapse formation by muscle activity. 391

MCCABE B.J. *see* HORN G. & MCCABE B.J. An autoradiographic method for studying the incorporation of uracil into acid-insoluble compounds in the brain. (D) 2*P*

McCABE B.J. *see* BATESON P.P.G., HORN G. & McCABE B.J. Imprinting and the incorporation of uracil in the chick brain: a radioautographic study. 70*P*

McCANCE R.A. & WILKINSON A.W. Increase in length and weight of the gut after by-passing the jejunum or the jejunum and half the ileum in suckling pigs. 49*P*

McCLELLAND M.E. *see* HARDING R., JOHNSON P., McCLELLAND M.E., McLEOD C.N., WHYTE P.L. & WILKINSON A.R. Respiratory and cardiovascular responses to feeding in lambs. 40*P*

MacDERMOTT A.J. *see* BERGEL D.H., BROOKS D.E., MacDERMOTT A.J., ROBINSON J.L. & SLEIGHT P. Baroreceptor firing frequency and activation of carotid sinus vascular smooth muscle in dogs. 37*P*

MacDONALD J.F. & NISTRI A. A comparison of the action of glutamate, ibotenate and other related amino acids on feline spinal interneurones. 449

McGARRICK J. & THEXTON A. Computer-aided analysis of jaw and hyoid movement. (D) 9*P*

McGARRICK J. *see* ELEY C., GRIFFITHS C., McGARRICK J. & THEXTON A. A method for studying excitability changes in the oral reflexes of the decerebrate rat. (D) 17*P*

McGARRICK J.D., REYNOLDS J.M. & THEXTON A.J. Apparatus for the application of controlled mechanical stimuli intraorally in man and its experimental use. (D) 8*P*

MACKIE M. *see* BENNETT B., MACKIE M. & OGSTON D. Properties of plasma plasminogen activators. 76*P*

McLEOD C.N. *see* HARDING R., JOHNSON P., McCLELLAND M.E., McLEOD C.N., WHYTE P.L. & WILKINSON A.R. Respiratory and cardiovascular responses to feeding in lambs. 40*P*

McMAHON S.B. & MORRISON J.F.B. Convergence of visceral and somatic axons on neurones which ascend in the lateral funiculus of the cat. 56*P*

McREYNOLDS John S. *see* GORMAN A.L.F. & McREYNOLDS John S. Ionic effects on the membrane potential of hyperpolarizing photoreceptor in scallop retina. 345

MADILL D. *see* BASSETT J.M., HUNZIKER V. & MADILL D. Glycine and alanine regulation of glucagon secretion in foetal and post-natal lambs. 51*P*

MARSDEN C.D., MERTON P.A. & MORTON H.B. Anticipatory postural responses in the human subject. 47*P*

MARSHALL J.M. *see* GUERTZENSTEIN P.G., HILTON S.M., MARSHALL J.M. & TIMMS R.J. Experiments on the origin of vasomotor tone. 78*P*

MEI N. Modes of activation of intestinal receptors. (T) 86*P*

MERRILL E.G. & YAKSH T.L. Properties of cerebellum parallel fibres and the Lissauer tract of the cat. 71*P*

MERTON P.A. *see* MARSDEN C.D., MERTON P.A. & MORTON H.B. Anticipatory postural responses in the human subject. 47*P*

MOISESCU D.G. & THIELECZEK R. Calcium and strontium concentration changes within skinned muscle preparations following a change in the external bathing solution. 241

MONCADA S., SALMON J.A., VANE J.R. & WHITTLE B.J.R. Formation of prostacyclin and its product 6-oxo-$PGF_{1\alpha}$ by the gastric mucosa of several species. (D) 4*P*

MONCADA S. *see* HIGGS G.A., MONCADA S. & VANE J.R. Prostacyclin is a potent dilator of arterioles in the hamster cheek pouch. 30*P*

MORGAN Miriam *see* HOWE A., MORGAN Miriam & PACK R.J. A comparison of the ultrastructure of the abdominal vagal paraganglia and similar tissues in the rat. 34*P*

MORRISON J.F.B. *see* McMAHON S.B. & MORRISON J.F.B. Convergence of visceral and somatic axons on neurones which ascend in the lateral funiculus of the cat. 56*P*

MORTOLA J.P. & SANT'AMBROGIO G. Mechanics of the trachea and behaviour of its stretch receptors. 31*P*

MORTON H.B. *see* MARSDEN C.D., MERTON P.A. & MORTON H.B. Anticipatory postural responses in the human subject. 47*P*

MULVANY M.J. *see* HALPERN W., MULVANY M.J. & WARSHAW D.M. Mechanical properties of smooth muscle cells in the walls of arterial resistance vessels. 85

MUNDAY K.A., NOBLE A.R. & ROWE B.P. Actions of α-, β- and ganglion-blockade on the pressor responses to angiotensin I and II in the conscious rabbit. 21*P*

MURPHY R.F. *see* BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50*P*

MUSHENS J. *see* BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50*P*

NASLONSKA Elzbieta *see* BUDZINSKA Krystyna, KARCZEWSKI W.A., NASLONSKA Elzbieta, ROMANIUK J.R. & RYBA M. The ability of the respiratory complex to memorise previous events (T) 86*P*

NAYLER Winifred G., POOLE-WILSON P.A. & WILLIAMS A. Ouabain-induced contractures in mammalian heart muscle. 75*P*

NEAL M.J. *see* BOWERY N.G. & NEAL M.J. Differential effect of veratridine and potassium depolarization on [^{3}H]GABA release from neurones and glia. 58*P*

NICHOLSON A.N. & STONE Barbara M. Adaptation of sleep to British Summer Time. 22*P*

NICHOLSON C. *see* GARDNER-MEDWIN A.R. & NICHOLSON C. Measurements of extracellular potassium and calcium concentration during passage of current across the surface of the brain. 66*P*

NISHI S. *see* GALLAGHER J.P., HIGASHI H. & NISHI S. Characterization and ionic basis of GABA-induced depolarizations recorded *in vitro* from cat primary afferent neurones. 263

NISTRI A. *see* MacDONALD J.F. & NISTRI A. A comparison of the action of glutamate, ibotenate and other related amino acids on feline spinal interneurones. 449

NOBLE A.R. *see* MUNDAY K.A., NOBLE A.R. & ROWE B.P. Actions of α-, β- and ganglion-blockade on the pressor responses to angiotensin I and II in the conscious rabbit. 21*P*

OGSTON D. *see* BENNETT B., MACKIE M. & OGSTON D. Properties of plasma plasminogen activators. 76*P*

ORCHARDSON R. The generation of nerve impulses in mammalian axons by changing the concentrations of the normal constituents of extracellular fluid. 177

PACK R.J. *see* AL-UGAILY Layla H. & PACK R.J. The use of an antibody staining technique to demonstrate exogenous antigens in guinea-pig trachea. (D) 15*P*

PACK R.J. *see* HOWE A., MORGAN Miriam & PACK R.J. A comparison of the ultrastructure of the abdominal vagal paraganglia and similar tissues in the rat. 34*P*

PAGÈS B. *see* BARKER D., BESSOU P., JANKOWSKA Elżbieta, PAGÈS B. & STACEY M.J. Identification of intrafusal muscle fibres activated by single fusimotor axons and injected with fluorescent dye in cat tenuissimus spindles. 149

PAPAKOSTOPOULOS D. A precentral macropotential with short latency as a possible indicator of response reafferent activity in man. 72*P*

PERKINS M.N. & WHITEHEAD S.A. Electrophysiology of medial forebrain bundle connections with preoptic anterior hypothalamic neurones. (D) 16*P*

PETERSEN O.H. *see* IWATSUKI N. & PETERSEN O.H. Membrane potential, resistance, and intracellular communication in the lacrimal gland: effects of acetylcholine and adrenaline. 507

PHILLIPS Jean *see* CANFIELD S.P., CURWAIN B.P., PHILLIPS Jean & PRICE Carolyn Acid secretion without changes in mucosal cyclic nucleotides in the guinea-pig stomach. 52*P*

PHIPPS R.J. *see* GALLAGHER J.T., HALL R.L., JEFFERY P.K., PHIPPS R.J. & RICHARDSON P.S. The nature and origin of tracheal secretions released in response to pilocarpine and ammonia. 36*P*

PICKLES Hilary G. & SIMMONDS M.A. Field potentials, inhibition and the effect of pentobarbitone in the rat olfactory cortex slice. 135

POCHOBRADSKY J. *see* BERTRAND D., FUORTES M.G.F. & POCHOBRADSKY J. Actions of EGTA and high calcium on the cones in the turtle retina. 419

POOLE-WILSON P.A. *see* NAYLER Winifred G., POOLE-WILSON P.A. & WILLIAMS A. Ouabain-induced contractures in mammalian heart muscle. 75*P*

POTHMANN Brigitte *see* BANET Manuel, HENSEL Herbert & POTHMANN Brigitte Autonomic thermoregulation after intermittent cooling of the spinal cord and cold exposure in the rat. 439

PRATT O.E. *see* DANIEL P.M., PRATT O.E. & SPARGO E. Storage and homoeostatic functions of the skeletal muscles in muscular dystrophy. 41*P*

PRICE Carolyn *see* CANFIELD S.P., CURWAIN B.P., PHILLIPS Jean & PRICE Carolyn Acid secretion without changes in mucosal cyclic nucleotides in the guinea-pig stomach. 52*P*

PRYMAK-MICHELINAKI S.M. *see* DORMANDY J.A., FLUTE P.T., PRYMAK-MICHELINAKI S.M. & REID H. Erythrocyte deformability and blood viscosity in peripheral circulatory disease. (D) 19*P*

PUIL E. *see* KRNJEVIĆ K., PUIL E. & WERMAN R. EGTA and motoneuronal after-potentials. 199

PUIL E. *see* KRNJEVIĆ K., PUIL E. & WERMAN R. Significance of 2,4-dinitrophenol action on spinal motoneurones. 225

RANG H.P. *see* LARGE W.A. & RANG H.P. Incorporation of acetylmonoethylcholine into the transmitter pool at the mammalian neuromuscular junction. 61*P*

REID H. *see* DORMANDY J.A., FLUTE P.T., PRYMAK-MICHELINAKI S.M. & REID H. Erythrocyte deformability and blood viscosity in peripheral circulatory disease. (D) 19*P*

REYNOLDS J.M. *see* MCGARRICK J.D., REYNOLDS J.M. & THEXTON A.J. Apparatus for the application of controlled mechanical stimuli intraorally in man and its experimental use. (D) 8*P*

REYNOLDS J.M. & THEXTON A.J. The effect upon the masseteric electromyogram of double mechanical stimuli applied to teeth. 65*P*

RICHARDS I.M. *see* DIXON M., JACKSON D.M., RICHARDS I.M. & VENDY K. The effects of acetylcholine and histamine on total lung resistance, dynamic lung compliance and lung irritant receptor discharge in the anaesthetized dog. 79*P*

RICHARDSON P.S. *see* BALFRE KIM & RICHARDSON P.S. Measurement of tracheal mucin secretion and potential difference in the chicken *in vitro*. (D) 12*P*

RICHARDSON P.S. *see* GALLAGHER J.T., HALL R.L., JEFFERY P.K., PHIPPS R.J. & RICHARDSON P.S. The nature and origin of tracheal secretions released in response to pilocarpine and ammonia. 36*P*

ROBERTS M.H.T. & WRIGHT D.M. Effect of dorsal rhizotomy on neuronal responses to two putative neurotransmitters of primary afferent neurones. 42*P*

ROBERTSON M.J. *see* CHAPMAN B.J., HORN N.M. & ROBERTSON M.J. Dopamine induced vasodilatation in the rat kidney. 24*P*

ROBINSON J.L. *see* BERGEL D.H., BROOKS D.E., MACDERMOTT A.J., ROBINSON J.L. & SLEIGHT P. Baroreceptor firing frequency and activation of carotid sinus vascular smooth muscle in dogs. 37*P*

ROMANIUK J.R. *see* BUDZINSKA KRYSTYNA, KARCZEWSKI W.A., NASLONSKA ELZBIETA, ROMANIUK J.R. & RYBA M. The ability of the respiratory complex to memorise previous events (T) 86*P*

ROSENBERG J.R. *see* LINDSAY K.W. & ROSENBERG J.R. Tonic labyrinth reflexes in the forelimb of the acute and chronic hemilabyrinthectomized cat. 43*P*

ROUMY M. *see* DAVIES A. & ROUMY M. The inspiratory augmenting effect of lung irritant receptor activity. (D) 14*P*

ROUMY M. The structure of the augmented breath. 77*P*

ROWE B.P. *see* MUNDAY K.A., NOBLE A.R. & ROWE B.P. Actions of α-, β- and ganglion-blockade on the pressor responses to angiotensin I and II in the conscious rabbit. 21*P*

RYBA M. *see* BUDZINSKA KRYSTYNA, KARCZEWSKI W.A., NASLONSKA ELZBIETA, ROMANIUK J.R. & RYBA M. The ability of the respiratory complex to memorise previous events (T) 86*P*

SALMON J.A. *see* MONCADA S., SALMON J.A., VANE J.R. & WHITTLE B.J.R. Formation of prostacyclin and its product 6-oxo-$PGF_{1\alpha}$ by the gastric mucosa of several species. (D) 4*P*

SANT'AMBROGIO G. *see* MORTOLA J.P. & SANT'AMBROGIO G. Mechanics of the trachea and behaviour of its stretch receptors. 31*P*

SARLES H. *see* DEMOL P. & SARLES H. Action of fatty acids on the exocrine pancreatic secretion of the conscious rat: further evidence for a protein pancreatic inhibitory factor. 27

SAUNDERS M.J. *see* ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

SCHOLFIELD C.N. Electrical properties of neurones in the olfactory cortex slice *in vitro*. 535

SCHOLFIELD C.N. A depolarizing inhibitory potential in neurones of the olfactory cortex *in vitro*. 547

SCHOLFIELD C.N. A barbiturate induced intensification of the inhibitory potential in slices of guinea-pig olfactory cortex. 559

SEARS T.A. *see* KIRKWOOD P.A. & SEARS T.A. The synaptic connexions to intercostal motoneurones as revealed by the average common excitation potential. 103

SEARS T.A. *see* BAINTON C.R., KIRKWOOD P.A. & SEARS T.A. Relationship between tonic and rhythmic respiratory activities. 32*P*

SERCK-HANSSEN GULDBORG *see* HELLE KAREN B. & SERCK-HANSSEN GULDBORG Differential release of noradrenaline, adrenaline and dopamine-β-hydroxylase from the bovine adrenal. 27*P*

SHERIDAN J.D. *see* HAMMER MARIE G. & SHERIDAN J.D. Electrical coupling and dye transfer between acinar cells in rat salivary glands. 495

SILVER MARIAN *see* BARNES R.J., COMLINE R.S. & SILVER MARIAN Effect of cortisol in liver glycogen concentrations in hypophysectomized, adrenalectomized and normal foetal lambs during late or prolonged gestation. 567

SIMMONDS M.A. *see* PICKLES Hilary G. & SIMMONDS M.A. Field potentials, inhibition and the effect of pentobarbitone in the rat olfactory cortex slice. 135

SLATER C.R. *see* LØMO T. & SLATER C.R. Control of acetylcholine sensitivity and synapse formation by muscle activity. 391

SLATER C.R. & WOLFE A.F.R. Abnormal reinnervation of muscles in dystrophic mice. 73*P*

SLEIGHT P. *see* BERGEL D.H., BROOKS D.E., MACDERMOTT A.J., ROBINSON J.L. & SLEIGHT P. Baroreceptor firing frequency and activation of carotid sinus vascular smooth muscle in dogs. 37*P*

SMY J.R. *see* BUCHANAN K.D., CONLON J.M., HARPER A.A., HOOD A.J.C., MURPHY R.F., MUSHENS J. & SMY J.R. The effects of pancreotone and glucagon-like immunoreactivity on pancreatic and gastric secretion. 50*P*

SPARGO E. *see* DANIEL P.M., PRATT O.E. & SPARGO E. Storage and homoeostatic functions of the skeletal muscles in muscular dystrophy. 41*P*

STACEY M.J. *see* BARKER D., BESSOU P., JANKOWSKA Elżbieta, PAGÈS B. & STACEY M.J. Identification of intrafusal muscle fibres activated by single fusimotor axons and injected with fluorescent dye in cat tenuissimus spindles. 149

STONE Barbara M. *see* NICHOLSON A.N. & STONE Barbara M. Adaptation of sleep to British Summer Time. 22*P*

STONE T.W. & TAYLOR D.A. Interactions of 5'AMP and 5'GMP with neuronal responses to noradrenaline in the cerebral cortex of rats. 45*P*

STRONG A.J. *see* BRANSTON N.M., STRONG A.J. & SYMON L. Impedance related to local blood flow in cerebral cortex. 81*P*

SYMON L. *see* BRANSTON N.M., STRONG A.J. & SYMON L. Impedance related to local blood flow in cerebral cortex. 81*P*

TAKATA M. *see* GUSTAFSSON B., LINDSTRÖM S. & TAKATA M. Afterhyperpolarization mechanism in the dorsal spinocerebellar tract cells of the cat. 283

TAYLOR D.A. *see* STONE T.W. & TAYLOR D.A. Interactions of 5'AMP and 5'GMP with neuronal responses to noradrenaline in the cerebral cortex of rats. 45*P*

THEXTON A. *see* McGARRICK J. & THEXTON A. Computer-aided analysis of jaw and hyoid movement. (D) 9*P*

THEXTON A. *see* ELEY C., GRIFFITHS C., McGARRICK J. & THEXTON A. A method for studying excitability changes in the oral reflexes of the decerebrate rat. (D) 17*P*

THEXTON A.J. *see* McGARRICK J.D., REYNOLDS J.M. & THEXTON A.J. Apparatus for the application of controlled mechanical stimuli intraorally in man and its experimental use. (D) 8*P*

THEXTON A.J. *see* REYNOLDS J.M. & THEXTON A.J. The effect upon the masseteric electromyogram of double mechanical stimuli applied to teeth. 65*P*

THIELECZEK R. *see* MOISESCU D.G. & THIELECZEK R. Calcium and strontium concentration changes within skinned muscle preparations following a change in the external bathing solution. 241

THOMAS M.V. *see* GORMAN A.L.F. & THOMAS M.V. Changes in the intracellular concentration of free calcium ions in a pace-maker neurone, measured with metallochromic indicator dye arsenazo III. 357

THOMAS S. *see* BISHOP J.H.V., ELEGBE R., GREEN R. & THOMAS S. Effects of phlorizin on glucose, water and sodium handling by the rat kidney. 467

THOMAS S. *see* BISHOP J.H.V., GREEN R. & THOMAS S. Effects of glucose on water and sodium reabsorption in the proximal convoluted tubule of rat kidney. 481

THORNE Joanna *see* GRIFFITHS E.C., JEFFCOATE S.L., THORNE Joanna & WHITE Nicki Age-dependent changes in serum inactivation of thyrotrophine-releasing hormone in rat and human. 28*P*

TIMMS R.J. *see* GUERTZENSTEIN P.G., HILTON S.M., MARSHALL J.M. & TIMMS R.J. Experiments on the origin of vasomotor tone. 78*P*

VANE J.R. *see* MONCADA S., SALMON J.A., VANE J.R. & WHITTLE B.J.R. Formation of prostacyclin and its product 6-oxo-$PGF_{1\alpha}$ by the gastric mucosa of several species. (D) 4*P*

VANE J.R. *see* HIGGS G.A., MONCADA S. & VANE J.R. Prostacyclin is a potent dilator of arterioles in the hamster cheek pouch. 30*P*

VENDY K. *see* DIXON M., JACKSON D.M., RICHARDS I.M. & VENDY K. The effects of acetylcholine and histamine on total lung resistance, dynamic lung compliance and lung irritant receptor discharge in the anaesthetized dog. 79*P*

VERGARA Graciela *see* HUGHES C.M. & VERGARA Graciela Phospholipids in lung surfactant of *Rana pipiens*. 48*P*

WAGNER G. *see* LEVIN R.J. & WAGNER G. Haemodynamic changes of the human vagina during sexual arousal assessed by heated oxygen electrode. 23*P*

WALL P.D. The properties of substantia gelatinosa units. 71*P*

WARSHAW D.M. *see* HALPERN W., MULVANY M.J. & WARSHAW D.M. Mechanical properties of smooth muscle cells in the walls of arterial resistance vessels. 85

WEI E. *see* FELDBERG W. & WEI E. Central sites at which morphine acts when producing cardiovascular effects. 57*P*

WERMAN R. *see* KRNJEVIĆ K., PUIL E. & WERMAN R. EGTA and motoneuronal after-potentials. 199

WERMAN R. *see* KRNJEVIĆ K., PUIL E. & WERMAN R. Significance of 2,4-dinitrophenol action on spinal motoneurones. 225

WHITEHEAD S.A. *see* PERKINS M.N. & WHITEHEAD S.A. Electrophysiology of medial forebrain bundle connections with preoptic anterior hypothalamic neurones. (D) 16*P*

WHITE Nicki *see* GRIFFITHS E.C., JEFFCOATE S.L., THORNE Joanna & WHITE Nicki Age-dependent changes in serum inactivation of thyrotrophine-releasing hormone in rat and human. 28*P*

WHITE R.G. *see* ASHTON I., COTES J.E., HOLLAND P., JOHNSON G.R., LEGG S.J., SAUNDERS M.J. & WHITE R.G. Acute effect of dibenz b.f.-1:4 oxazepine aerosol upon the lung function of healthy young men. 85*P*

WHITTEMBURY G. *see* FISCHBARG J. & WHITTEMBURY G. The effect of external pH on osmotic permeability, ion and fluid transport across isolated frog skin. 403

WHITTLE B.J.R. *see* MONCADA S., SALMON J.A., VANE J.R. & WHITTLE B.J.R. Formation of prostacyclin and its product 6-oxo-$PGF_{1\alpha}$ by the gastric mucosa of several species. (D) 4*P*

WHITTON P.D. *see* HEMS D.A., KIRK C.J. & WHITTON P.D. The use of the perfused liver or hepatocyte suspensions for the study of hepatic function. (D) 1*P*

WHYTE P.L. *see* HARDING R., JOHNSON P., MCCLELLAND M.E., MCLEOD C.N., WHYTE P.L. & WILKINSON A.R. Respiratory and cardiovascular responses to feeding in lambs. 40*P*

WIDDICOMBE J.G. *see* DAVIES A., DIXON M., WIDDICOMBE J.G. & WISE J.C.M. Lung stretch receptor paralysis by sulphur dioxide. (D) 13*P*

WIDDICOMBE J.G. *see* JEFFERY P.K., KORPAS J. & WIDDICOMBE J.G. Intraepithelial nerve fibres of the cat larynx and the expiration reflex. 35*P*

WILCOX C.S. Renin release from the dog's kidney during hypermagnesaemia. 25*P*

WILKINSON A.R. *see* HARDING R., JOHNSON P., MCCLELLAND M.E., MCLEOD C.N., WHYTE P.L. & WILKINSON A.R. Respiratory and cardiovascular responses to feeding in lambs. 40*P*

WILKINSON A.W. *see* MCCANCE R.A. & WILKINSON A.W. Increase in length and weight of the gut after by-passing the jejunum or the jejunum and half the ileum in suckling pigs. 49*P*

WILLIAMS A. *see* NAYLER Winifred G., POOLE-WILSON P.A. & WILLIAMS A. Ouabain-induced contractures in mammalian heart muscle. 75*P*

WILLIS J.S. *see* ELLORY J.C. & WILLIS J.S. Temperature dependence of the cation affinities of the sodium pump in red cells from hibernators and non-hibernators. 62*P*

WISE J.C.M. *see* DAVIES A., DIXON M., WIDDICOMBE J.G. & WISE J.C.M. Lung stretch receptor paralysis by sulphur dioxide. (D) 13*P*

WISE J.C.M. *see* DAVIES A. & WISE J.C.M. A simple method for measuring sulphur dioxide concentration in air. (D) (T) 21*P*

WOLFE A.F.R. *see* SLATER C.R. & WOLFE A.F.R. Abnormal reinnervation of muscles in dystrophic mice. 73*P*

WONG P.Y.D. & YEUNG C.H. Absorptive and secretory functions of the perfused rat cauda epididymis. 13

WOODBURY Dixon M. *see* JOHANSON Conrad E. & WOODBURY Dixon M. Uptake of [^{14}C]urea by the *in vivo* choroid plexus–cerebrospinal fluid–brain system: identification of sites of molecular sieving. 167

WOOD N.A.P. A inexpensive, simple and robust O_2-electrode. (D) 3*P*

WRIGHT D.M. *see* ROBERTS M.H.T. & WRIGHT D.M. Effect of dorsal rhizotomy on neuronal responses to two putative neurotransmitters of primary afferent neurones. 42*P*

YAKSH T.L. *see* MERRILL E.G. & YAKSH T.L. Properties of cerebellum parallel fibres and the Lissauer tract of the cat. 71*P*

YEUNG C.H. *see* WONG P.Y.D. & YEUNG C.H. Absorptive and secretory functions of the perfused rat cauda epididymis. 13

ZANGGER P. *see* GUSTAFSSON B. & ZANGGER P. Effect of repetitive activation on the afterhyperpolarization in dorsal spinocerebellar tract neurones. 303

ZANGGER P. *see* GUSTAFSSON B., LINDSTRÖM S. & ZANGGER P. Firing behaviour of dorsal spinocerebellar tract neurones. 321

ZEITLIN I.J. *see* EAGLESOM C.C. & ZEITLIN I.J. Studies on the mediation of the atropine-resistant response to neurostimulation of the guinea-pig distal colon. 68*P*

ZIVKOVIĆ B. *see* BULAT M. & ZIVKOVIĆ B. Exchange of 5-hydroxyindoleacetic acid between the spinal cord and lumbar cerebrospinal fluid. 191

CONTENTS OF VOLUME 276

March 1978

HIRST B.H., LABIB L.A. & REED J.D. Characteristics and tachyphylaxis of gastrin-stimulated gastric acid secretion in the cat. 1

ADELMAN William J. Jr. & FRENCH Robert J. Blocking of the squid axon potassium channel by external caesium ions. 13

BRINKMAN J., BUSH B.M. & PORTER R. Deficient influences of peripheral stimuli on precentral neurones in monkeys with dorsal column lesions. 27

ELLAWAY P.H. & TROTT Judy R. Autogenetic reflex action on to gamma motoneurones by stretch of triceps surae in the decerebrated cat. 49

DULHUNTY Angela F. The dependence of membrane potential on extracellular chloride concentration in mammalian skeletal muscle fibres. 67

MARCHIAFAVA P.L. & TORRE V. The responses of amacrine cells to light and intracellularly applied currents. 83

BAKER P.F. & SCHLAEPFER W.W. Uptake and binding of calcium by axoplasm isolated from giant axons of *Loligo* and *Myxicola*. 103

BAKER P.F. & McNAUGHTON P.A. The influence of extracellular calcium binding on the calcium efflux from squid axons. 127

HÅKANSON R., LARSSON L.-I., LIEDBERG G. & SUNDLER F. Evidence for H_2-receptor-mediated feed-back regulation of histamine release from endocrine cells in the rat stomach. 151

BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle responses in man to changes in load during accurate position maintenance. 159

CULL-CANDY S.G. Glutamate sensitivity and distribution of receptors along normal and denervated locust muscle fibres. 165

ONODERA K. & TAKEUCHI A. Effects of membrane potential and temperature on the excitatory post-synaptic current in the crayfish muscle. 183

FURUKAWA T. & MATSUURA S. Adaptive rundown of excitatory post-synaptic potentials at synapses between hair cells and eighth nerve fibres in the goldfish. 193

FURUKAWA T., HAYASHIDA Y. & MATSUURA S. Quantal analysis of the size of excitatory post-synaptic potentials at synapses between hair cells and afferent nerve fibres in goldfish. 211

MADDEN Kathleen Shaver & VAN DER KLOOT William Surface charges and the effects of calcium on the frequency of miniature end-plate potentials at the frog neuromuscular junction. 227

FABIATO Alexandre & FABIATO Françoise Effects of pH on the myofilaments and the sarcoplasmic reticulum of skinned cells from cardiac and skeletal muscle. 233

CALDWELL J.H. & DAW N.W. New properties of rabbit retinal ganglion cells. 257

CALDWELL J.H., DAW N.W. & WYATT H.J. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: lateral interactions for cells with more complex receptive fields. 277

CALDWELL J.H. & DAW N.W. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: changes in centre surround receptive fields. 299

BÜHLER H.U., DA PRADA M., HAEFELY W. & PICOTTI G.B. Plasma adrenaline, noradrenaline and dopamine in man and different animal species. 311

MARANDA B., RODRIGUES J.A.A., SCHACHTER M., SHNITKA T.K. & WEINBERG J. Studies on kallikrein in the duct systems of the salivary glands of the cat. 321

BATRA S. & BENGTSSON B. Effects of diethylstilboestrol and ovarian steroids on the contractile responses and calcium movements in rat uterine smooth muscle. 329

MALLART A. & MOLGÓ J. The effects of pH and curare on the time course of end-plate currents at the neuromuscular junction of the frog. 343

DUNWIDDIE Thomas & LYNCH Gary Long-term potentiation and depression of synaptic responses in the rat hippocampus: localization and frequency dependency. 353

GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Inhibition of baroreceptor and chemoreceptor reflexes on heart rate by afferents from the lungs. 369

GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Reflex bradycardia occurring in response to diving, nasopharyngeal stimulation and ocular pressure, and its modification by respiration and swallowing. 383

CARVER J.G. & MOTT Joan C. Renin substrate in plasma of unanaesthetized pregnant ewes and their foetal lambs. 395

TERRAR D.A. Effects of dithiothreitol on end-plate currents. 403

FITZSIMONS J.T. & KUCHARCZYK J. Drinking and haemodynamic changes induced in the dog by intracranial injection of components of the renin-angiotensin system. 419

FITZSIMONS J.T., KUCHARCZYK J. & RICHARDS Georgina Systemic angiotensin-induced drinking in the dog: a physiological phenomenon. 435

FLITNEY F.W. & HIRST D.G. Cross-bridge detachment and sarcomere 'give' during stretch of active frog's muscle. 449

FLITNEY F.W. & HIRST D.G. Filament sliding and energy absorbed by the cross-bridges in active muscle subjected to cyclical length changes. 467

DE GROAT W.C. & KRIER J. The sacral parasympathetic reflex pathway regulating colonic motility and defaecation in the cat. 481

ORMOS G. & MÁNYAI S. Anion transport of the red cell under non-equilibrium conditions. 501

GLITSCH H.G., GRABOWSKI W. & THIELEN J. Activation of the electrogenic sodium pump in guinea-pig atria by external potassium ions. 515

HAMMOND G.R. & RIDGE R.M.A.P. Properties of twitch motor units in snake costocutaneous muscle. 525

HAMMOND G.R. & RIDGE R.M.A.P. Post-tetanic potentiation of twitch motor units in snake costocutaneous muscle. 535

PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY

16–17 December 1977

DEMONSTRATIONS

Band D.M., Fry C.H. & Treasure T. An ion-selective electrode for the determination of calcium activity. 1*P*

Burnstock Geoffrey, Dennison Marion & Jones Rosemary Chronic stimulation of the hypogastric nerve in the male guinea-pig *in vivo*. 2*P*

Clark R.B., Gration K.A.F. & Usherwood P.N.R. Glutamate D-receptors on the locust retractor unguis muscle. 3*P*

Holden J.S., Suter C. & Usherwood P.N.R. Isolation of neurone somata exhibiting pharmacological responses from the locust nervous system. 4*P*

Clarke K.U. & Howell R. Techniques and problems in the use of cine photo-micrography of living cells *in situ* in tissues and organs forced to respond to changing work loads. 5*P*

Standen N.B. Force transducers for use in the 0–30 mN range using single-crystal silicon elements. 5*P*

Hooper R.H. Simulation of hepatic uptake processes using a small computer. 6*P*

Smith K.J. A method to represent the spectrum of refractory periods of transmission of the constituent fibres of a nerve. 7*P*

Chance Elizabeth & Tomlinson D.R. A method for the measurement of physiological dead space and alveolar ventilation in anaesthetized small animals. 9*P*

Sempik Anne K. An electromyographic study of intercostal muscle activity in man during breath-holding. 10*P*

Tomlinson D.R. Audio-tape/pamphlet independent learning packages for a course in cell excitation: evidence that they can be at least as effective as conventional lectures. 11*P*

Short A.H. A mobile computer-assisted data-logging apparatus. 12*P*

Jackson A.R., Short A.H. & Tomlinson D.R. A flow-sensitive apparatus for studying the responses of the constrictor muscles of perfused tubular organs. 13*P*

Adeoshun I.O. Movement artifacts with trans-thoracic methods of measuring ventilation identified by split-screen videotape recording. 14*P*

Cockbill S.R. & Heptinstall S. A method for estimating prostaglandin synthetase activity in blood platelets and the extent of its pharmacological inhibition. 15*P*

Adams J.H., Bevan Jane, Cockbill S.R., Taylor Patricia M. & Will E.J. An automatic six-channel aggregometer to measure blood platelet or crystal aggregation. 16*P*

Kabler Patricia A., Knapp M.S. & Pownall R. The use of an automatic liquid sampler in the study of circadian rhythms in the sheep. 18*P*

Cove-Smith J.R. & Hillier P. Posture change in rats with experimental renal damage: effect on renal excretion. 19*P*

Birmingham A.T., Williams E.J., Wilson C.G. & Wright P.W. Finger tremor in normal subjects. 20*P*

Davies W.L. & Plant G.R. The recording and analysis of human ocular microtremor. 21*P*

Barber C. & Galloway N.R. A versatile stimulus system for the investigation of visual-evoked potentials. 22*P*

Gale A.G., Johnson F. & Worthington B.S. On-line real time analysis of eye movements. 23*P*

Barber C., Galloway N.R. & Jackson S.A. A microprocessor-controlled electro-oculography system. 23*P*

Healy T.E.J. & Wilcox A. Chronic exposure of rats to inhalational anaesthetic agents. 24*P*

Bassey E. Joan, Fentem P.H., Fitton D.L., MacDonald I.C., Patrick J.M. & Scriven P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. 25*P*

Bassey E. Joan, Cornes G.W. & Fentem P.H. Heart rate changes during jogging monitored with Oxford Instruments tape-recorders. 25*P*

Bennett T., Hampton J.R. & Hosking D. Cardiovascular reflexes in patients with diabetes mellitus. 25*P*

Goddard M. Methods for measuring the compression of superficial veins by support garments. 25*P*

COMMUNICATIONS

Heptinstall S. & Taylor Patricia M. The influence of anticoagulants and extracellular divalent cations on blood platelet behaviour. 25*P*

Deitmer J.W. & Ellis D. Comparison of the action of various cardiac glycosides on the intracellular sodium activity of sheep heart Purkinje fibres. 26*P*

Garnier D., Nargeot J., Ojeda C. & Rougier O. Action of carbachol on atrial fibres: induced extra current and slow inward current inhibition. 27*P*

Simmons N.L. Hormone stimulation of net transepithelial Na transport in cell culture. 28*P*

Chipperfield A.R. Stimulation of active transport in human erythrocytes by human plasma. 29*P*

Balls M. & Holmes C.H. Calcium dependence of α-adrenoreceptor stimulation of myoepithelial cell contraction in the granular glands of *Xenopus laevis* skin. 30*P*

Kidd G.L. & Williams R.G. Changes in conduction velocity of afferent axons from muscles operating on immobilized joints. 31*P*

Catley D.M. & Pascoe J.E. The reflex effects of sural nerve stimulation upon gastrocnemius fusimotor neurones of the rabbit. 32*P*

Merrill E.G. Absence of correlations between lateral expiratory neurones in cat. 33*P*

Ridge R.M.A.P. & Thomson Alex M. *Xenopus* motor units co-innervated with spindles. 34*P*

Amassian V.E. & Rudell A. When does the cerebellum become important in co-ordinating placing movements? 35*P*

Ernst W. & Kemp C.M. Limits of bleaching in isolated frog retinas by monochromatic microsecond flashes. 36*P*

Linkens D.A. Colonic electrical activity and frequency multiplication in coupled non-linear oscillators. 37*P*

Flitney F.W., Lamb J.F. & Singh J. Intracellular cyclic nucleotides and contractility of the hypodynamic frog ventricle. 38*P*

Ally A.I., Barrette W.E., Cunnane S., Horrobin D.F., Karmali R.A., Karmazyn M., Manku M.S., Morgan R.O. & Nicolaou K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

Pearce Elizabeth A.N., Wingate D.L. & Wünsch E. The effects of gastrointestinal hormones and feeding on the basic electric rhythm of the stomach and duodenum of the conscious dog. 41*P*

Mepham T.B. & Peters A.R. Effects of spermidine and prostaglandin $F_{2\alpha}$ on amino acid and [^{3}H]uridine uptake by lactating guinea-pig mammary gland *in vitro*. 42*P*

Knapp M.S. & Pownall R. Circadian variations in delayed hypersensitivity to a contact sensitizing agent. 42*P*

Dawes Elizabeth A., Hodos W. & Keating M.J. Direction-dependent displacement of the receptive fields of frog retinal ganglion cells in response to moving stimuli. 43*P*

Martin K.A.C. Combination of fibre-fibre competition and regional tectal differences accounting for the results of tectal graft experiments in goldfish. 44*P*

Bunt S.M., Horder T.J. & Martin K.A.C. Evidence that optic fibres regenerating across the goldfish tectum may be assigned termination sites on a 'first come, first served' basis. 45*P*

Derrington A.M. Development of selectivity in kitten striate cortex. 46*P*

Blakemore Colin, Garey L.J. & Vital-Durand F. Reversal of physiological effects of monocular deprivation in monkeys. 47*P*

Garey L.J. & Vital-Durand F. Reversal of morphological effects of monocular deprivation in monkeys. 49*P*

Shapiro Colin M. Sleepiness of the long-distance runner. 50*P*

Carver J.G. & Mott Joan C. Renin substrate in ewes and their fetal lambs. 51*P*

Rutter N. Evaporative water loss from the skin of new-born infants. 51*P*

Broughton Pipkin Fiona, Oats J.J.N. & Symonds E.M. Changes in the human renin-angiotensin system in the first 4 hr after delivery. 51*P*

Boyd C.A.R. A classification of systems available for amino acid exit from small intestine into the blood. 52*P*

Holmes R., Lobley R.W. & Sandle G.I. Movement of water and sodium during the absorption of glucose and maltose in the jejunum in man. 53*P*

Barber D.C., Levin R.J. & Mitchell M.A. Estimation of Real K_m for *in vivo* absorption of glucose. 54*P*

Dimaline R. & Dockray G.J. Molecular variants of vasoactive intestinal peptide in human colonic mucosa. 55*P*

Elphick M.C. & Hull D. The transfer of fatty acids across the sheep placenta. 56*P*

Munday K.A., Noble A.R. & Rowe B.P. Differential actions of anaesthetic agents on the pressor potency of angiotensins I and II in the rabbit. 57*P*

Daniel P.M., Love E.R. & Pratt O.E. Insulin and the transport of glucose into the heart *in vivo* during fasting. 58*P*

Morris B. & Morris R. Immunoglobulin transmission in the neonatal rat. 59*P*

Hepburn Dianne, Maughan R.J. & Williams C. Glycogenolysis in urethane and pentobarbitone anaesthetized rats. 59*P*

Rothwell Nancy J. & Stock M.J. Mechanisms of weight gain and loss in reversible obesity in the rat. 60*P*

Rayner V. & Weekes T.E.C. Feeding disrupts the migrating myoelectric complex: is insulin the cause? 61*P*

Brown R.C., Care A.D. & Pickard D.W. Magnesium absorption from the rumen of sheep. 62*P*

Herdon H., Wilkinson M. & Wilson C.A. An increase in number of brain adrenergic receptors during precocious puberty in the immature female rat. 63*P*

Gibson T.M. A potential source of error in the calculation of some respiratory variables from measurements made with mass spectrometers. 64*P*

Barnes R.J., Bower E.A. & Rink T.J. Haemodynamic responses to stimulation of the splanchnic and cardiac sympathetic nerves at different right atrial pressures. 65*P*

Peaker M. Do osmoreceptors or blood volume receptors initiate salt-gland secretion in birds? 66*P*

Bradbury M.W.B. Proportion of cerebrospinal fluid draining into jugular lymphatic trunks of the cat. 67*P*

Patrick J.M. & Pearson S.B. Propranolol and the ventilatory response to CO_2 and hypoxia in man. 68*P*

Adigun S.A. The influence of the sympathetic nervous system on right heart filling pressure during lower body negative pressure in the anaesthetized rabbit. 69*P*

Evans R.G., Forrester T. & Mueller Hiltrud S. Intravascular passage of adenosine triphosphate through lung of baboon. 70*P*

Griffiths C. & Thexton A.J. Reflex oral activity in infant and adult decerebrate rats. 71*P*

Bennett G.W., Edwardson J.A. & Marcano de Cotte Dayssi Effects of acetylcholine and catecholamines on the release of corticotrophin-releasing factor by synaptosomes isolated from the hypothalamic median eminence. 72*P*

Evans R.H. & Watkins J.C. Specific antagonism of synaptic excitation and amino acid induced depolarization in the rat isolated spinal cord. 73*P*

Giles D.P., Joy R.T. & Usherwood P.N.R. Growth of isolated locust neurones in culture. 74*P*

Clark R.B., Gration K.A.F. & Usherwood P.N.R. Denervation-induced changes in extrajunctional glutamate responses of insect muscle. 75*P*

Cox B., Kerwin R. & Lee T.F. Blockade of hypothalamic dopamine receptors reduces the response of rats to an imposed heat load. 76*P*

Ewart Wendy R. & Logan J.G. The effects of desipramine on the noradrenaline mediated responses in rat cortical cell firing rate. 77*P*

Edman K.A.P. & Flitney F.W. Non-uniform behaviour of sarcomeres during isometric relaxation of skeletal muscle. 78*P*

AUTHOR INDEX

(D) Denotes Demonstration (T) Title only

ADAMS J.H., BEVAN Jane, COCKBILL S.R., TAYLOR Patricia M. & WILL E.J. An automatic six-channel aggregometer to measure blood platelet or crystal aggregation. (D) 16*P*

ADELMAN William J. Jr. & FRENCH Robert J. Blocking of the squid axon potassium channel by external caesium ions. 13

ADEOSHUN I.O. Movement artifacts with trans-thoracic methods of measuring ventilation identified by split-screen videotape recording. (D) 14*P*

ADIGUN S.A. The influence of the sympathetic nervous system on right heart filling pressure during lower body negative pressure in the anaesthetized rabbit. 69*P*

ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

AMASSIAN V.E. & RUDELL A. When does the cerebellum become important in co-ordinating placing movements? 35*P*

BAKER P.F. & SCHLAEPFER W.W. Uptake and binding of calcium by axoplasm isolated from giant axons of *Loligo* and *Myxicola*. 103

BAKER P.F. & MCNAUGHTON P.A. The influence of extracellular calcium binding on the calcium efflux from squid axons. 127

BALLS M. & HOLMES C.H. Calcium dependence of α-adrenoreceptor stimulation of myoepithelial cell contraction in the granular glands of *Xenopus laevis* skin. 30*P*

BAND D.M., FRY C.H. & TREASURE T. An ion-selective electrode for the determination of calcium activity. (D) 1*P*

BARBER C. & GALLOWAY N.R. A versatile stimulus system for the investigation of visual-evoked potentials. (D) 22*P*

BARBER C., GALLOWAY N.R. & JACKSON S.A. A microprocessor-controlled electro-oculography system. (D) 23*P*

BARBER D.C., LEVIN R.J. & MITCHELL M.A. Estimation of Real K_m for *in vivo* absorption of glucose. 54*P*

BARNES R.J., BOWER E.A. & RINK T.J. Haemodynamic responses to stimulation of the splanchnic and cardiac sympathetic nerves at different right atrial pressures. 65*P*

BARRETTE W.E. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

BASSEY E. Joan, FENTEM P.H., FITTON D.L., MACDONALD I.C., PATRICK J.M. & SCRIVEN P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. (D) (T) 25*P*

BASSEY E. Joan, CORNES G.W. & FENTEM P.H. Heart rate changes during jogging monitored with Oxford Instruments tape-recorders. (D) (T) 25*P*

BATRA S. & BENGTSSON B. Effects of diethylstilboestrol and ovarian steroids on the contractile responses and calcium movements in rat uterine smooth muscle. 329

BENGTSSON B. *see* BATRA S. & BENGTSSON B. Effects of diethylstilboestrol and ovarian steroids on the contractile responses and calcium movements in rat uterine smooth muscle. 329

BENNETT G.W., EDWARDSON J.A. & MARCANO DE COTTE Dayssi Effects of acetylcholine and catecholamines on the release of corticotrophin-releasing factor by synaptosomes isolated from the hypothalamic median eminence. 72*P*

BENNETT T., HAMPTON J.R. & HOSKING D. Cardiovascular reflexes in patients with diabetes mellitus. (D) (T) 25*P*

BEVAN Jane *see* ADAMS J.H., BEVAN Jane, COCKBILL S.R., TAYLOR Patricia M. & WILL E.J. An automatic six-channel aggregometer to measure blood platelet or crystal aggregation. (D) 16*P*

BIRMINGHAM A.T., WILLIAMS E.J., WILSON C.G. & WRIGHT P.W. Finger tremor in normal subjects. (D) 20P

BLAKEMORE Colin, GAREY L.J. & VITAL-DURAND F. Reversal of physiological effects of monocular deprivation in monkeys. 47P

BOWER E.A. *see* BARNES R.J., BOWER E.A. & RINK T.J. Haemodynamic responses to stimulation of the splanchnic and cardiac sympathetic nerves at different right atrial pressures. 65P

BOYD C.A.R. A classification of systems available for amino acid exit from small intestine into the blood. 52P

BRADBURY M.W.B. Proportion of cerebrospinal fluid draining into jugular lymphatic trunks of the cat. 67P

BRINKMAN J., BUSH B.M. & PORTER R. Deficient influences of peripheral stimuli on precentral neurones in monkeys with dorsal column lesions. 27

BROUGHTON PIPKIN Fiona, OATS J.J.N. & SYMONDS E.M. Changes in the human renin-angiotensin system in the first 4 hr after delivery. 51P

BROWN R.C., CARE A.D. & PICKARD D.W. Magnesium absorption from the rumen of sheep. 62P

BÜHLER H.U., DA PRADA M., HAEFELY W. & PICOTTI G.B. Plasma adrenaline, noradrenaline and dopamine in man and different animal species. 311

BUNT S.M., HORDER T.J. & MARTIN K.A.C. Evidence that optic fibres regenerating across the goldfish tectum may be assigned termination sites on a 'first come, first served' basis. 45P

BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle responses in man to changes in load during accurate position maintenance. 159

BURNSTOCK Geoffrey, DENNISON Marion & JONES Rosemary Chronic stimulation of the hypogastric nerve in the male guinea-pig *in vivo*. (D) 2P

BUSH B.M. *see* BRINKMAN J., BUSH B.M. & PORTER R. Deficient influences of peripheral stimuli on precentral neurones in monkeys with dorsal column lesions. 27

CALDWELL J.H. & DAW N.W. New properties of rabbit retinal ganglion cells. 257

CALDWELL J.H., DAW N.W. & WYATT H.J. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: lateral interactions for cells with more complex receptive fields. 277

CALDWELL J.H. & DAW N.W. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: changes in centre surround receptive fields. 299

CARE A.D. *see* BROWN R.C., CARE A.D. & PICKARD D.W. Magnesium absorption from the rumen of sheep. 62P

CARVER J.G. & MOTT Joan C. Renin substrate in ewes and their fetal lambs. (T) 51P

CARVER J.G. & MOTT Joan C. Renin substrate in plasma of unanaesthetized pregnant ewes and their foetal lambs. 395

CATLEY D.M. & PASCOE J.E. The reflex effects of sural nerve stimulation upon gastrocnemius fusimotor neurones of the rabbit. (D) 32P

CHANCE Elizabeth & TOMLINSON D.R. A method for the measurement of physiological dead space and alveolar ventilation in anaesthetized small animals. (D) 9P

CHIPPERFIELD A.R. Stimulation of active transport in human erythrocytes by human plasma. 29P

CLARK R.B., GRATION K.A.F. & USHERWOOD P.N.R. Glutamate D-receptors on the locust retractor unguis muscle. (D) 3P

CLARK R.B., GRATION K.A.F. & USHERWOOD P.N.R. Denervation-induced changes in extrajunctional glutamate responses of insect muscle. 75P

CLARKE K.U. & HOWELL R. Techniques and problems in the use of cine photo-micrography of living cells *in situ* in tissues and organs forced to respond to changing work loads. (D) (T) 5P

COCKBILL S.R. & HEPTINSTALL S. A method for estimating prostaglandin synthetase activity in blood platelets and the extent of its pharmacological inhibition. (D) 15P

COCKBILL S.R. *see* ADAMS J.H., BEVAN Jane, COCKBILL S.R., TAYLOR Patricia M. & WILL E.J. An automatic six-channel aggregometer to measure blood platelet or crystal aggregation. (D) 16P

CORNES G.W. *see* BASSEY E. Joan, CORNES G.W. & FENTEM P.H. Heart rate changes during jogging monitored with Oxford Instruments tape-recorders. (D) (T) 25P

COVE-SMITH J.R. & HILLIER P. Posture change in rats with experimental renal damage: effect on renal excretion. (D) 19P

COX B., KERWIN R. & LEE T.F. Blockade of hypothalamic dopamine receptors reduces the response of rats to an imposed heat load. 76P

CULL-CANDY S.G. Glutamate sensitivity and distribution of receptors along normal and denervated locust muscle fibres. 165

CUNNANE S. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40P

DANIEL P.M., LOVE E.R. & PRATT O.E. Insulin and the transport of glucose into the heart *in vivo* during fasting. 58P

DA PRADA M. *see* BÜHLER H.U., DA PRADA M., HAEFELY W. & PICOTTI G.B. Plasma adrenaline, noradrenaline and dopamine in man and different animal species. 311

DAVIES W.L. & PLANT G.R. The recording and analysis of human ocular microtremor. (D) 21P

DAWES Elizabeth A., HODOS W. & KEATING M.J. Direction-dependent displacement of the receptive fields of frog retinal ganglion cells in response to moving stimuli. 43P

DAW N.W. *see* CALDWELL J.H. & DAW N.W. New properties of rabbit retinal ganglion cells. 257

DAW N.W. *see* CALDWELL J.H., DAW N.W. & WYATT H.J. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: lateral interactions for cells with more complex receptive fields. 277

DAW N.W. *see* CALDWELL J.H. & DAW N.W. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: changes in centre surround receptive fields. 299

DE GROAT W.C. & KRIER J. The sacral parasympathetic reflex pathway regulating colonic motility and defaecation in the cat. 481

DEITMER J.W. & ELLIS D. Comparison of the action of various cardiac glycosides on the intracellular sodium activity of sheep heart Purkinje fibres. 26P

DENNISON Marion *see* BURNSTOCK Geoffrey, DENNISON Marion & JONES Rosemary Chronic stimulation of the hypogastric nerve in the male guinea-pig *in vivo*. (D) 2P

DERRINGTON A.M. Development of selectivity in kitten striate cortex. 46P

DIMALINE R. & DOCKRAY G.J. Molecular variants of vasoactive intestinal peptide in human colonic mucosa. 55P

DOCKRAY G.J. *see* DIMALINE R. & DOCKRAY G.J. Molecular variants of vasoactive intestinal peptide in human colonic mucosa. 55P

DULHUNTY Angela F. The dependence of membrane potential on extracellular chloride concentration in mammalian skeletal muscle fibres. 67

DUNWIDDIE Thomas & LYNCH Gary Long-term potentiation and depression of synaptic responses in the rat hippocampus: localization and frequency dependency. 353

EDMAN K.A.P. & FLITNEY F.W. Non-uniform behaviour of sarcomeres during isometric relaxation of skeletal muscle. 78P

EDWARDSON J.A. *see* BENNETT G.W., EDWARDSON J.A. & MARCANO DE COTTE Dayssi Effects of acetylcholine and catecholamines on the release of corticotrophin-releasing factor by synaptosomes isolated from the hypothalamic median eminence. 72P

ELLAWAY P.H. & TROTT Judy R. Autogenetic reflex action on to gamma motoneurones by stretch of triceps surae in the decerebrated cat. 49

ELLIS D. *see* DEITMER J.W. & ELLIS D. Comparison of the action of various cardiac glycosides on the intracellular sodium activity of sheep heart Purkinje fibres. 26P

ELPHICK M.C. & HULL D. The transfer of fatty acids across the sheep placenta. 56P

ERNST W. & KEMP C.M. Limits of bleaching in isolated frog retinas by monochromatic microsecond flashes. 36P

EVANS R.G., FORRESTER T. & MUELLER Hiltrud S. Intravascular passage of adenosine triphosphate through lung of baboon. 70P

EVANS R.H. & WATKINS J.C. Specific antagonism of synaptic excitation and amino acid induced depolarization in the rat isolated spinal cord. 73P

EWART Wendy R. & LOGAN J.G. The effects of desipramine on the noradrenaline mediated responses in rat cortical cell firing rate. 77P

FABIATO Alexandre & FABIATO Françoise Effects of pH on the myofilaments and the sarcoplasmic reticulum of skinned cells from cardiac and skeletal muscle. 233

FABIATO Françoise *see* FABIATO Alexandre & FABIATO Françoise Effects of pH on the myofilaments and the sarcoplasmic reticulum of skinned cells from cardiac and skeletal muscle. 233

FENTEM P.H. *see* BASSEY E. Joan, FENTEM P.H., FITTON D.L., MacDONALD I.C., PATRICK J.M. & SCRIVEN P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. (D) (T) 25*P*

FENTEM P.H. *see* BASSEY E. Joan, CORNES G.W. & FENTEM P.H. Heart rate changes during jogging monitored with Oxford Instruments tape-recorders. (D) (T) 25*P*

FITTON D.L. *see* BASSEY E. Joan, FENTEM P.H., FITTON D.L., MacDONALD I.C., PATRICK J.M. & SCRIVEN P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. (D) (T) 25*P*

FITZSIMONS J.T. & KUCHARCZYK J. Drinking and haemodynamic changes induced in the dog by intracranial injection of components of the renin-angiotensin system. 419

FITZSIMONS J.T., KUCHARCZYK J. & RICHARDS Georgina Systemic angiotensin-induced drinking in the dog: a physiological phenomenon. 435

FLITNEY F.W., LAMB J.F. & SINGH J. Intracellular cyclic nucleotides and contractility of the hypodynamic frog ventricle. 38*P*

FLITNEY F.W. *see* EDMAN K.A.P. & FLITNEY F.W. Non-uniform behaviour of sarcomeres during isometric relaxation of skeletal muscle. 78*P*

FLITNEY F.W. & HIRST D.G. Cross-bridge detachment and sarcomere 'give' during stretch of active frog's muscle. 449

FLITNEY F.W. & HIRST D.G. Filament sliding and energy absorbed by the cross-bridges in active muscle subjected to cyclical length changes. 467

FORRESTER T. *see* EVANS R.G., FORRESTER T. & MUELLER Hiltrud S. Intravascular passage of adenosine triphosphate through lung of baboon. 70*P*

FRENCH Robert J. *see* ADELMAN William J. Jr. & FRENCH Robert J. Blocking of the squid axon potassium channel by external caesium ions. 13

FRY C.H. *see* BAND D.M., FRY C.H. & TREASURE T. An ion-selective electrode for the determination of calcium activity. (D) 1*P*

FURUKAWA T. & MATSUURA S. Adaptive rundown of excitatory post-synaptic potentials at synapses between hair cells and eighth nerve fibres in the goldfish. 193

FURUKAWA T., HAYASHIDA Y. & MATSUURA S. Quantal analysis of the size of excitatory post-synaptic potentials at synapses between hair cells and afferent nerve fibres in goldfish. 211

GALE A.G., JOHNSON F. & WORTHINGTON B.S. On-line real time analysis of eye movements. (D) 23*P*

GALLOWAY N.R. *see* BARBER C. & GALLOWAY N.R. A versatile stimulus system for the investigation of visual-evoked potentials. (D) 22*P*

GALLOWAY N.R. *see* BARBER C., GALLOWAY N.R. & JACKSON S.A. A microprocessor-controlled electro-oculography system. (D) 23*P*

GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Inhibition of baroreceptor and chemoreceptor reflexes on heart rate by afferents from the lungs. 369

GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Reflex bradycardia occurring in response to diving, nasopharyngeal stimulation and ocular pressure, and its modification by respiration and swallowing. 383

GAREY L.J. *see* BLAKEMORE Colin, GAREY L.J. & VITAL-DURAND F. Reversal of physiological effects of monocular deprivation in monkeys. 47*P*

GAREY L.J. & VITAL-DURAND F. Reversal of morphological effects of monocular deprivation in monkeys. 49*P*

GARNIER D., NARGEOT J., OJEDA C. & ROUGIER O. Action of carbachol on atrial fibres: induced extra current and slow inward current inhibition. 27*P*

GIBSON T.M. A potential source of error in the calculation of some respiratory variables from measurements made with mass spectrometers. 64*P*

GILES D.P., JOY R.T. & USHERWOOD P.N.R. Growth of isolated locust neurones in culture. 74*P*

GLITSCH H.G., GRABOWSKI W. & THIELEN J. Activation of the electrogenic sodium pump in guinea-pig atria by external potassium ions. 515

GODDARD M. Methods for measuring the compression of superficial veins by support garments. (D) (T) 25*P*

GRABOWSKI W. *see* GLITSCH H.G., GRABOWSKI W. & THIELEN J. Activation of the electrogenic sodium pump in guinea-pig atria by external potassium ions. 515

GRATION K.A.F. *see* CLARK R.B., GRATION K.A.F. & USHERWOOD P.N.R. Glutamate D-receptors on the locust retractor unguis muscle. (D) 3*P*

GRATION K.A.F. *see* CLARK R.B., GRATION K.A.F. & USHERWOOD P.N.R. Denervation-induced changes in extrajunctional glutamate responses of insect muscle. 75*P*

GRIFFITHS C. & THEXTON A.J. Reflex oral activity in infant and adult decerebrate rats. 71*P*

HAEFELY W. *see* BÜHLER H.U., DA PRADA M., HAEFELY W. & PICOTTI G.B. Plasma adrenaline, noradrenaline and dopamine in man and different animal species. 311

HAGBARTH Karl-Erik *see* BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle responses in man to changes in load during accurate position maintenance. 159

HÅKANSON R., LARSSON L.-I., LIEDBERG G. & SUNDLER F. Evidence for H_2-receptor-mediated feed-back regulation of histamine release from endocrine cells in the rat stomach. 151

HAMMOND G.R. & RIDGE R.M.A.P. Properties of twitch motor units in snake costocutaneous muscle. 525

HAMMOND G.R. & RIDGE R.M.A.P. Post-tetanic potentiation of twitch motor units in snake costocutaneous muscle. 535

HAMPTON J.R. *see* BENNETT T., HAMPTON J.R. & HOSKING D. Cardiovascular reflexes in patients with diabetes mellitus. (D) (T) 25*P*

HAYASHIDA Y. *see* FURUKAWA T., HAYASHIDA Y. & MATSUURA S. Quantal analysis of the size of excitatory post-synaptic potentials at synapses between hair cells and afferent nerve fibres in goldfish. 211

HIRST B.H., LABIB L.A. & REED J.D. Characteristics and tachyphylaxis of gastrin-stimulated gastric acid secretion in the cat. 1

HEALY T.E.J. & WILCOX A. Chronic exposure of rats to inhalational anaesthetic agents. (D) 24*P*

HEPBURN Dianne, MAUGHAN R.J. & WILLIAMS C. Glycogenolysis in urethane and pentobarbitone anaesthetized rats. 59*P*

HEPTINSTALL S. *see* COCKBILL S.R. & HEPTINSTALL S. A method for estimating prostaglandin synthetase activity in blood platelets and the extent of its pharmacological inhibition. (D) 15*P*

HEPTINSTALL S. & TAYLOR Patricia M. The influence of anticoagulants and extracellular divalent cations on blood platelet behaviour. 25*P*

HERDON H., WILKINSON M. & WILSON C.A. An increase in number of brain adrenergic receptors during precocious puberty in the immature female rat. 63*P*

HILLIER P. *see* COVE-SMITH J.R. & HILLIER P. Posture change in rats with experimental renal damage: effect on renal excretion. (D) 19*P*

HIRST D.G. *see* FLITNEY F.W. & HIRST D.G. Cross-bridge detachment and sarcomere 'give' during stretch of active frog's muscle. 449

HIRST D.G. *see* FLITNEY F.W. & HIRST D.G. Filament sliding and energy absorbed by the cross-bridges in active muscle subjected to cyclical length changes. 467

HODOS W. *see* DAWES Elizabeth A., HODOS W. & KEATING M.J. Direction-dependent displacement of the receptive fields of frog retinal ganglion cells in response to moving stimuli. 43*P*

HOLDEN J.S., SUTER C. & USHERWOOD P.N.R. Isolation of neurone somata exhibiting pharmacological responses from the locust nervous system. (D) 4*P*

HOLMES C.H. *see* BALLS M. & HOLMES C.H. Calcium dependence of α-adrenoreceptor stimulation of myoepithelial cell contraction in the granular glands of *Xenopus laevis* skin. 30*P*

HOLMES R., LOBLEY R.W. & SANDLE G.I. Movement of water and sodium during the absorption of glucose and maltose in the jejunum in man. 53*P*

HOOPER R.H. Simulation of hepatic uptake processes using a small computer. (D) 6*P*

HORDER T.J. *see* BUNT S.M., HORDER T.J. & MARTIN K.A.C. Evidence that optic fibres regenerating across the goldfish tectum may be assigned termination sites on a 'first come, first served' basis. 45*P*

HORROBIN D.F. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

HOSKING D. *see* BENNETT T., HAMPTON J.R. & HOSKING D. Cardiovascular reflexes in patients with diabetes mellitus. (D) (T) 25*P*

HOWELL R. *see* CLARKE K.U. & HOWELL R. Techniques and problems in the use of cine photomicrography of living cells *in situ* in tissues and organs forced to respond to changing work loads. (D) (T) 5*P*

HULL D. *see* ELPHICK M.C. & HULL D. The transfer of fatty acids across the sheep placenta. 56*P*

JACKSON A.R., SHORT A.H. & TOMLINSON D.R. A flow-sensitive apparatus for studying the responses of the constrictor muscles of perfused tubular organs. (D) 13P

JACKSON S.A. *see* BARBER C., GALLOWAY N.R. & JACKSON S.A. A microprocessor-controlled electro-oculography system. (D) 23P

JOHNSON F. *see* GALE A.G., JOHNSON F. & WORTHINGTON B.S. On-line real time analysis of eye movements. (D) 23P

JONES Rosemary *see* BURNSTOCK Geoffrey, DENNISON Marion & JONES Rosemary Chronic stimulation of the hypogastric nerve in the male guinea-pig *in vivo*. (D) 2P

JOY R.T. *see* GILES D.P., JOY R.T. & USHERWOOD P.N.R. Growth of isolated locust neurones in culture. 74P

KABLER Patricia A., KNAPP M.S. & POWNALL R. The use of an automatic liquid sampler in the study of circadian rhythms in the sheep. (D) 18P

KARMALI R.A. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40P

KARMAZYN M. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40P

KEATING M.J. *see* DAWES Elizabeth A., HODOS W. & KEATING M.J. Direction-dependent displacement of the receptive fields of frog retinal ganglion cells in response to moving stimuli. 43P

KEMP C.M. *see* ERNST W. & KEMP C.M. Limits of bleaching in isolated frog retinas by monochromatic microsecond flashes. 36P

KERWIN R. *see* COX B., KERWIN R. & LEE T.F. Blockade of hypothalamic dopamine receptors reduces the response of rats to an imposed heat load. 76P

KIDD G.L. & WILLIAMS R.G. Changes in conduction velocity of afferent axons from muscles operating on immobilized joints. 31P

KNAPP M.S. *see* KABLER Patricia A., KNAPP M.S. & POWNALL R. The use of an automatic liquid sampler in the study of circadian rhythms in the sheep. (D) 18P

KNAPP M.S. & POWNALL R. Circadian variations in delayed hypersensitivity to a contact sensitizing agent. 42P

KRIER J. *see* DE GROAT W.C. & KRIER J. The sacral parasympathetic reflex pathway regulating colonic motility and defaecation in the cat. 481

KUCHARCZYK J. *see* FITZSIMONS J.T. & KUCHARCZYK J. Drinking and haemodynamic changes induced in the dog by intracranial injection of components of the renin-angiotensin system. 419

KUCHARCZYK J. *see* FITZSIMONS J.T., KUCHARCZYK J. & RICHARDS Georgina Systemic angiotensin-induced drinking in the dog: a physiological phenomenon. 435

LABIB L.A. *see* HIRST B.H., LABIB L.A. & REED J.D. Characteristics and tachyphylaxis of gastrin-stimulated gastric acid secretion in the cat. 1

LAMB J.F. *see* FLITNEY F.W., LAMB J.F. & SINGH J. Intracellular cyclic nucleotides and contractility of the hypodynamic frog ventricle. 38P

LARSSON L.-I. *see* HÅKANSON R., LARSSON L.-I., LIEDBERG G. & SUNDLER F. Evidence for H_2-receptor-mediated feed-back regulation of histamine release from endocrine cells in the rat stomach. 151

LEE T.F. *see* COX B., KERWIN R. & LEE T.F. Blockade of hypothalamic dopamine receptors reduces the response of rats to an imposed heat load. 76P

LEVIN R.J. *see* BARBER D.C., LEVIN R.J. & MITCHELL M.A. Estimation of Real K_m for *in vivo* absorption of glucose. 54P

LIEDBERG G. *see* HÅKANSON R., LARSSON L.-I., LIEDBERG G. & SUNDLER F. Evidence for H_2-receptor-mediated feed-back regulation of histamine release from endocrine cells in the rat stomach. 151

LINKENS D.A. Colonic electrical activity and frequency multiplication in coupled non-linear oscillators. 37P

LOBLEY R.W. *see* HOLMES R., LOBLEY R.W. & SANDLE G.I. Movement of water and sodium during the absorption of glucose and maltose in the jejunum in man. 53P

LÖFSTEDT Lars *see* BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle responses in man to changes in load during accurate position maintenance. 159

LOGAN J.G. *see* EWART Wendy R. & LOGAN J.G. The effects of desipramine on the noradrenaline mediated responses in rat cortical cell firing rate. 77*P*

LOVE E.R. *see* DANIEL P.M., LOVE E.R. & PRATT O.E. Insulin and the transport of glucose into the heart *in vivo* during fasting. 58*P*

LYNCH Gary *see* DUNWIDDIE Thomas & LYNCH Gary Long-term potentiation and depression of synaptic responses in the rat hippocampus: localization and frequency dependency. 353

McCLOSKEY D.I. *see* GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Inhibition of baroreceptor and chemoreceptor reflexes on heart rate by afferents from the lungs. 369

McCLOSKEY D.I. *see* GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Reflex bradycardia occurring in response to diving, nasopharyngeal stimulation and ocular pressure, and its modification by respiration and swallowing. 383

MacDONALD I.C. *see* BASSEY E. Joan, FENTEM P.H., FITTON D.L., MacDONALD I.C., PATRICK J.M. & SCRIVEN P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. (D) (T) 25*P*

McNAUGHTON P.A. *see* BAKER P.F. & McNAUGHTON P.A. The influence of extracellular calcium binding on the calcium efflux from squid axons. 127

MADDEN Kathleen Shaver & VAN DER KLOOT William Surface charges and the effects of calcium on the frequency of miniature end-plate potentials at the frog neuromuscular junction. 227

MALLART A. & MOLGÓ J. The effects of pH and curare on the time course of end-plate currents at the neuromuscular junction of the frog. 343

MANKU M.S. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

MÁNYAI S. *see* ORMOS G. & MÁNYAI S. Anion transport of the red cell under non-equilibrium conditions. 501

MARANDA B., RODRIGUES J.A.A., SCHACHTER M., SHNITKA T.K. & WEINBERG J. Studies on kallikrein in the duct systems of the salivary glands of the cat. 321

MARCANO DE COTTE Dayssi *see* BENNETT G.W., EDWARDSON J.A. & MARCANO DE COTTE Dayssi Effects of acetylcholine and catecholamines on the release of corticotrophin-releasing factor by synaptosomes isolated from the hypothalamic median eminence. 72*P*

MARCHIAFAVA P.L. & TORRE V. The responses of amacrine cells to light and intracellularly applied currents. 83

MARTIN K.A.C. Combination of fibre-fibre competition and regional tectal differences accounting for the results of tectal graft experiments in goldfish. 44*P*

MARTIN K.A.C. *see* BUNT S.M., HORDER T.J. & MARTIN K.A.C. Evidence that optic fibres regenerating across the goldfish tectum may be assigned termination sites on a 'first come, first served' basis. 45*P*

MATSUURA S. *see* FURUKAWA T. & MATSUURA S. Adaptive rundown of excitatory post-synaptic potentials at synapses between hair cells and eighth nerve fibres in the goldfish. 193

MATSUURA S. *see* FURUKAWA T., HAYASHIDA Y. & MATSUURA S. Quantal analysis of the size of excitatory post-synaptic potentials at synapses between hair cells and afferent nerve fibres in goldfish. 211

MAUGHAN R.J. *see* HEPBURN Dianne, MAUGHAN R.J. & WILLIAMS C. Glycogenolysis in urethane and pentobarbitone anaesthetized rats. 59*P*

MEPHAM T.B. & PETERS A.R. Effects of spermidine and prostaglandin $F_{2\alpha}$ on amino acid and [^{3}H]uridine uptake by lactating guinea-pig mammary gland *in vitro*. 42*P*

MERRILL E.G. Absence of correlations between lateral expiratory neurones in cat. 33*P*

MITCHELL M.A. *see* BARBER D.C., LEVIN R.J. & MITCHELL M.A. Estimation of Real K_m for *in vivo* absorption of glucose. 54*P*

MOLGÓ J. *see* MALLART A. & MOLGÓ J. The effects of pH and curare on the time course of end-plate currents at the neuromuscular junction of the frog. 343

MORGAN R.O. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

MORRIS B. & MORRIS R. Immunoglobulin transmission in the neonatal rat. 59*P*

MORRIS R. *see* MORRIS B. & MORRIS R. Immunoglobulin transmission in the neonatal rat. 59*P*

MOTT Joan C. *see* CARVER J.G. & MOTT Joan C. Renin substrate in ewes and their fetal lambs. (T) 51*P*

MOTT Joan C. *see* CARVER J.G. & MOTT Joan C. Renin substrate in plasma of unanaesthetized pregnant ewes and their foetal lambs. 395

MUELLER Hiltrud S. *see* EVANS R.G., FORRESTER T. & MUELLER Hiltrud S. Intravascular passage of adenosine triphosphate through lung of baboon. 70*P*

MUNDAY K.A., NOBLE A.R. & ROWE B.P. Differential actions of anaesthetic agents on the pressor potency of angiotensins I and II in the rabbit. 57*P*

NARGEOT J. *see* GARNIER D., NARGEOT J., OJEDA C. & ROUGIER O. Action of carbachol on atrial fibres: induced extra current and slow inward current inhibition. 27*P*

NICOLAOU K.C. *see* ALLY A.I., BARRETTE W.E., CUNNANE S., HORROBIN D.F., KARMALI R.A., KARMAZYN M., MANKU M.S., MORGAN R.O. & NICOLAOU K.C. Prostaglandin I_2 (prostacyclin) inhibits intracellular calcium release. 40*P*

NOBLE A.R. *see* MUNDAY K.A., NOBLE A.R. & ROWE B.P. Differential actions of anaesthetic agents on the pressor potency of angiotensins I and II in the rabbit. 57*P*

OATS J.J.N. *see* BROUGHTON PIPKIN Fiona, OATS J.J.N. & SYMONDS E.M. Changes in the human renin-angiotensin system in the first 4 hr after delivery. 51*P*

OJEDA C. *see* GARNIER D., NARGEOT J., OJEDA C. & ROUGIER O. Action of carbachol on atrial fibres: induced extra current and slow inward current inhibition. 27*P*

ONODERA K. & TAKEUCHI A. Effects of membrane potential and temperature on the excitatory post-synaptic current in the crayfish muscle. 183

ORMOS G. & MÁNYAI S. Anion transport of the red cell under non-equilibrium conditions. 501

PASCOE J.E. *see* CATLEY D.M. & PASCOE J.E. The reflex effects of sural nerve stimulation upon gastrocnemius fusimotor neurones of the rabbit. (D) 32*P*

PATRICK J.M. *see* BASSEY E. Joan, FENTEM P.H., FITTON D.L., MacDONALD I.C., PATRICK J.M. & SCRIVEN P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. (D) (T) 25*P*

PATRICK J.M. & PEARSON S.B. Propranolol and the ventilatory response to CO_2 and hypoxia in man. 68*P*

PEAKER M. Do osmoreceptors or blood volume receptors initiate salt-gland secretion in birds? 66*P*

PEARCE Elizabeth A.N., WINGATE D.L. & WÜNSCH E. The effects of gastrointestinal hormones and feeding on the basic electric rhythm of the stomach and duodenum of the conscious dog. 41*P*

PEARSON S.B. *see* PATRICK J.M. & PEARSON S.B. Propranolol and the ventilatory response to CO_2 and hypoxia in man. 68*P*

PETERS A.R. *see* MEPHAM T.B. & PETERS A.R. Effects of spermidine and prostaglandin $F_{2\alpha}$ on amino acid and [^{3}H]uridine uptake by lactating guinea-pig mammary gland *in vitro*. 42*P*

PICKARD D.W. *see* BROWN R.C., CARE A.D. & PICKARD D.W. Magnesium absorption from the rumen of sheep. 62*P*

PICOTTI G.B. *see* BÜHLER H.U., DA PRADA M., HAEFELY W. & PICOTTI G.B. Plasma adrenaline, noradrenaline and dopamine in man and different animal species. 311

PLANT G.R. *see* DAVIES W.L. & PLANT G.R. The recording and analysis of human ocular microtremor. (D) 21*P*

PORTER R. *see* BRINKMAN J., BUSH B.M. & PORTER R. Deficient influences of peripheral stimuli on precentral neurones in monkeys with dorsal column lesions. 27

POTTER Erica K. *see* GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Inhibition of baroreceptor and chemoreceptor reflexes on heart rate by afferents from the lungs. 369

POTTER Erica K. *see* GANDEVIA S.C., McCLOSKEY D.I. & POTTER Erica K. Reflex bradycardia occurring in response to diving, nasopharyngeal stimulation and ocular pressure, and its modification by respiration and swallowing. 383

POWNALL R. *see* KABLER Patricia A., KNAPP M.S. & POWNALL R. The use of an automatic liquid sampler in the study of circadian rhythms in the sheep. (D) 18*P*

POWNALL R. *see* KNAPP M.S. & POWNALL R. Circadian variations in delayed hypersensitivity to a contact sensitizing agent. 42*P*

PRATT O.E. *see* DANIEL P.M., LOVE E.R. & PRATT O.E. Insulin and the transport of glucose into the heart *in vivo* during fasting. 58*P*

RAYNER V. & WEEKES T.E.C. Feeding disrupts the migrating myoelectric complex: is insulin the cause? 61*P*

REED J.D. *see* HIRST B.H., LABIB L.A. & REED J.D. Characteristics and tachyphylaxis of gastrin-stimulated gastric acid secretion in the cat. 1

RICHARDS Georgina *see* FITZSIMONS J.T., KUCHARCZYK J. & RICHARDS Georgina Systemic angiotensin-induced drinking in the dog: a physiological phenomenon. 435

RIDGE R.M.A.P. & THOMSON Alex M. *Xenopus* motor units co-innervated with spindles. 34*P*

RIDGE R.M.A.P. *see* HAMMOND G.R. & RIDGE R.M.A.P. Properties of twitch motor units in snake costocutaneous muscle. 525

RIDGE R.M.A.P. *see* HAMMOND G.R. & RIDGE R.M.A.P. Post-tetanic potentiation of twitch motor units in snake costocutaneous muscle. 535

RINK T.J. *see* BARNES R.J., BOWER E.A. & RINK T.J. Haemodynamic responses to stimulation of the splanchnic and cardiac sympathetic nerves at different right atrial pressures. 65*P*

RODRIGUES J.A.A. *see* MARANDA B., RODRIGUES J.A.A., SCHACHTER M., SHNITKA T.K. & WEINBERG J. Studies on kallikrein in the duct systems of the salivary glands of the cat. 321

ROTHWELL Nancy J. & STOCK M.J. Mechanisms of weight gain and loss in reversible obesity in the rat. 60*P*

ROUGIER O. *see* GARNIER D., NARGEOT J., OJEDA C. & ROUGIER O. Action of carbachol on atrial fibres: induced extra current and slow inward current inhibition. 27*P*

ROWE B.P. *see* MUNDAY K.A., NOBLE A.R. & ROWE B.P. Differential actions of anaesthetic agents on the pressor potency of angiotensins I and II in the rabbit. 57*P*

RUDELL A. *see* AMASSIAN V.E. & RUDELL A. When does the cerebellum become important in co-ordinating placing movements? 35*P*

RUTTER N. Evaporative water loss from the skin of new-born infants. 51*P*

SANDLE G.I. *see* HOLMES R., LOBLEY R.W. & SANDLE G.I. Movement of water and sodium during the absorption of glucose and maltose in the jejunum in man. 53*P*

SCHACHTER M. *see* MARANDA B., RODRIGUES J.A.A., SCHACHTER M., SHNITKA T.K. & WEINBERG J. Studies on kallikrein in the duct systems of the salivary glands of the cat. 321

SCHLAEPFER W.W. *see* BAKER P.F. & SCHLAEPFER W.W. Uptake and binding of calcium by axoplasm isolated from giant axons of *Loligo* and *Myxicola*. 103

SCRIVEN P. *see* BASSEY E. Joan, FENTEM P.H., FITTON D.L., MacDONALD I.C., PATRICK J.M. & SCRIVEN P. Analysis of long-term monitoring of heart rate and footfall to give a measure of physical activity. (D) (T) 25*P*

SEMPIK Anne K. An electromyographic study of intercostal muscle activity in man during breath-holding. (D) 10*P*

SHAPIRO Colin M. Sleepiness of the long-distance runner. 50*P*

SHNITKA T.K. *see* MARANDA B., RODRIGUES J.A.A., SCHACHTER M., SHNITKA T.K. & WEINBERG J. Studies on kallikrein in the duct systems of the salivary glands of the cat. 321

SHORT A.H. A mobile computer-assisted data-logging apparatus. (D) 12*P*

SHORT A.H. *see* JACKSON A.R., SHORT A.H. & TOMLINSON D.R. A flow-sensitive apparatus for studying the responses of the constrictor muscles of perfused tubular organs. (D) 13*P*

SIMMONS N.L. Hormone stimulation of net transepithelial Na transport in cell culture. 28*P*

SINGH J. *see* FLITNEY F.W., LAMB J.F. & SINGH J. Intracellular cyclic nucleotides and contractility of the hypodynamic frog ventricle. 38*P*

SMITH K.J. A method to represent the spectrum of refractory periods of transmission of the constituent fibres of a nerve. (D) 7*P*

STANDEN N.B. Force transducers for use in the 0–30 mN range using single-crystal silicon elements. (D) 5*P*

STOCK M.J. *see* ROTHWELL Nancy J. & STOCK M.J. Mechanisms of weight gain and loss in reversible obesity in the rat. 60*P*

SUNDLER F. *see* HÅKANSON R., LARSSON L.-I., LIEDBERG G. & SUNDLER F. Evidence for H_2-receptor-mediated feed-back regulation of histamine release from endocrine cells in the rat stomach. 151

SUTER C. *see* HOLDEN J.S., SUTER C. & USHERWOOD P.N.R. Isolation of neurone somata exhibiting pharmacological responses from the locust nervous system. (D) 4*P*

SYMONDS E.M. *see* BROUGHTON PIPKIN Fiona, OATS J.J.N. & SYMONDS E.M. Changes in the human renin-angiotensin system in the first 4 hr after delivery. 51*P*

TAKEUCHI A. *see* ONODERA K. & TAKEUCHI A. Effects of membrane potential and temperature on the excitatory post-synaptic current in the crayfish muscle. 183

TAYLOR Patricia M. *see* ADAMS J.H., BEVAN Jane, COCKBILL S.R., TAYLOR Patricia M. & WILL E.J. An automatic six-channel aggregometer to measure blood platelet or crystal aggregation. (D) 16*P*

TAYLOR Patricia M. *see* HEPTINSTALL S. & TAYLOR Patricia M. The influence of anticoagulants and extracellular divalent cations on blood platelet behaviour. 25*P*

TERRAR D.A. Effects of dithiothreitol on end-plate currents. 403

THEXTON A.J. *see* GRIFFITHS C. & THEXTON A.J. Reflex oral activity in infant and adult decerebrate rats. 71*P*

THIELEN J. *see* GLITSCH H.G., GRABOWSKI W. & THIELEN J. Activation of the electrogenic sodium pump in guinea-pig atria by external potassium ions. 515

THOMSON Alex M. *see* RIDGE R.M.A.P. & THOMSON Alex M. *Xenopus* motor units co-innervated with spindles. 34*P*

TOMLINSON D.R. *see* CHANCE Elizabeth & TOMLINSON D.R. A method for the measurement of physiological dead space and alveolar ventilation in anaesthetized small animals. (D) 9*P*

TOMLINSON D.R. Audio-tape/pamphlet independent learning packages for a course in cell excitation: evidence that they can be at least as effective as conventional lectures. (D) 11*P*

TOMLINSON D.R. *see* JACKSON A.R., SHORT A.H. & TOMLINSON D.R. A flow-sensitive apparatus for studying the responses of the constrictor muscles of perfused tubular organs. (D) 13*P*

TORRE V. *see* MARCHIAFAVA P.L. & TORRE V. The responses of amacrine cells to light and intracellularly applied currents. 83

TREASURE T. *see* BAND D.M., FRY C.H. & TREASURE T. An ion-selective electrode for the determination of calcium activity. (D) 1*P*

TROTT Judy R. *see* ELLAWAY P.H. & TROTT Judy R. Autogenetic reflex action on to gamma motoneurones by stretch of triceps surae in the decerebrated cat. 49

USHERWOOD P.N.R. *see* CLARK R.B., GRATION K.A.F. & USHERWOOD P.N.R. Glutamate D-receptors on the locust retractor unguis muscle. (D) 3*P*

USHERWOOD P.N.R. *see* HOLDEN J.S., SUTER C. & USHERWOOD P.N.R. Isolation of neurone somata exhibiting pharmacological responses from the locust nervous system. (D) 4*P*

USHERWOOD P.N.R. *see* GILES D.P., JOY R.T. & USHERWOOD P.N.R. Growth of isolated locust neurones in culture. 74*P*

USHERWOOD P.N.R. *see* CLARK R.B., GRATION K.A.F. & USHERWOOD P.N.R. Denervation-induced changes in extrajunctional glutamate responses of insect muscle. 75*P*

VAN DER KLOOT William *see* MADDEN Kathleen Shaver & VAN DER KLOOT William Surface charges and the effects of calcium on the frequency of miniature end-plate potentials at the frog neuromuscular junction. 227

VITAL-DURAND F. *see* BLAKEMORE Colin, GAREY L.J. & VITAL-DURAND F. Reversal of physiological effects of monocular deprivation in monkeys. 47*P*

VITAL-DURAND F. *see* GAREY L.J. & VITAL-DURAND F. Reversal of morphological effects of monocular deprivation in monkeys. 49*P*

WATKINS J.C. *see* EVANS R.H. & WATKINS J.C. Specific antagonism of synaptic excitation and amino acid induced depolarization in the rat isolated spinal cord. 73*P*

WEEKES T.E.C. *see* RAYNER V. & WEEKES T.E.C. Feeding disrupts the migrating myoelectric complex: is insulin the cause? 61*P*

WEINBERG J. *see* MARANDA B., RODRIGUES J.A.A., SCHACHTER M., SHNITKA T.K. & WEINBERG J. Studies on kallikrein in the duct systems of the salivary glands of the cat. 321

WILCOX A. *see* HEALY T.E.J. & WILCOX A. Chronic exposure of rats to inhalational anaesthetic agents. (D) 24*P*

WILKINSON M. *see* HERDON H., WILKINSON M. & WILSON C.A. An increase in number of brain adrenergic receptors during precocious puberty in the immature female rat. 63*P*

WILL E.J. *see* ADAMS J.H., BEVAN Jane, COCKBILL S.R., TAYLOR Patricia M. & WILL E.J. An automatic six-channel aggregometer to measure blood platelet or crystal aggregation. (D) 16*P*

WILLIAMS C. *see* HEPBURN Dianne, MAUGHAN R.J. & WILLIAMS C. Glycogenolysis in urethane and pentobarbitone anaesthetized rats. 59*P*

WILLIAMS E.J. *see* BIRMINGHAM A.T., WILLIAMS E.J., WILSON C.G. & WRIGHT P.W. Finger tremor in normal subjects. (D) 20*P*

WILLIAMS R.G. *see* KIDD G.L. & WILLIAMS R.G. Changes in conduction velocity of afferent axons from muscles operating on immobilized joints. 31*P*

WILSON C.A. *see* HERDON H., WILKINSON M. & WILSON C.A. An increase in number of brain adrenergic receptors during precocious puberty in the immature female rat. 63*P*

WILSON C.G. *see* BIRMINGHAM A.T., WILLIAMS E.J., WILSON C.G. & WRIGHT P.W. Finger tremor in normal subjects. (D) 20*P*

WINGATE D.L. *see* PEARCE Elizabeth A.N., WINGATE D.L. & WÜNSCH E. The effects of gastrointestinal hormones and feeding on the basic electric rhythm of the stomach and duodenum of the conscious dog. 41*P*

WORTHINGTON B.S. *see* GALE A.G., JOHNSON F. & WORTHINGTON B.S. On-line real time analysis of eye movements. (D) 23*P*

WRIGHT P.W. *see* BIRMINGHAM A.T., WILLIAMS E.J., WILSON C.G. & WRIGHT P.W. Finger tremor in normal subjects. (D) 20*P*

WÜNSCH E. *see* PEARCE Elizabeth A.N., WINGATE D.L. & WÜNSCH E. The effects of gastrointestinal hormones and feeding on the basic electric rhythm of the stomach and duodenum of the conscious dog. 41*P*

WYATT H.J. *see* CALDWELL J.H., DAW N.W. & WYATT H.J. Effects of picrotoxin and strychnine on rabbit retinal ganglion cells: lateral interactions for cells with more complex receptive fields. 277

CONTENTS OF VOLUME 277

April 1978

BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

BROWN A.G., ROSE P.K. & SNOW P.J. Morphology and organization of axon collaterals from afferent fibres of slowly adapting type I units in cat spinal cord. 15

DOSTROVSKY J.O. & HELLON R.F. The prepresentation of facial temperature in the caudal trigeminal nucleus of the cat. 29

CRANSTON W.I., HELLON R.F. & TOWNSEND Yvonne Thermal stimulation of intra-abdominal veins in conscious rabbits. 49

NJÅ Arild & PURVES Dale The effects of nerve growth factor and its antiserum on synapses in the superior cervical ganglion of the guinea-pig. 53

BLAKELEY A.G.H. & NICOL C.J.M. Accumulation of amines by rabbit erythrocytes *in vitro*. 77

SZURSZEWSKI J.H. A study of the canine gastric action potential in the presence of tetraethylammonium chloride. 91

DEWHURST D.G., HADI N.A., HUTSON D. & SCRATCHERD T. The permeability of the secretin stimulated exocrine pancreas to non-electrolytes. 103

GERDES Ulrik, KRISTENSEN Jørn, MØLLER Jesper V. & SHEIKH M. Iqbal Renal handling of phenol red. III. Bidirectional transport. 115

BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle activity in man during shortening and lengthening contractions. 131

BORG Jörgen, GRIMBY Lennart & HANNERZ Jan Axonal conduction velocity and voluntary discharge properties of individual short toe extensor motor units in man. 143

NEHER Erwin & STEINBACH Joe Henry Local anaesthetics transiently block currents through single acetylcholine-receptor channels. 153

BARER Gwenda R., HERGET J., SLOAN P.J.M. & SUGGETT A.J. The effect of acute and chronic hypoxia on thoracic gas volume in anaesthetized rats. 177

ESSEN D.C. Van & ZEKI S.M. The topographic organization of rhesus monkey prestriate cortex. 193

ZEKI S.M. The cortical projections of foveal striate cortex in the rhesus monkey. 227

ZEKI S.M. The third visual complex of rhesus monkey prestriate cortex. 245

ZEKI S.M. Uniformity and diversity of structure and function in rhesus monkey prestriate visual cortex. 273

BLINKS J.R., RÜDEL R. & TAYLOR S.R. Calcium transients in isolated amphibian skeletal muscle fibres: detection with aequorin. 291

YOUNG J.D. Nucleoside transport in sheep erythrocytes: genetically controlled transport variation and its influence on erythrocyte ATP concentrations. 325

RURAK D.W. Plasma vasopressin levels during hypoxaemia and the cardiovascular effects of exogenous vasopressin in foetal and adult sheep. 341

EKLUND Brita & KAIJSER Lennart Blood flow in the resting forearm during prolonged contralateral isometric handgrip at maximal effort. 359

GIBSON A.T. & SEGAL M.B. A study of the composition of pericardial fluid, with special reference to the probable mechanism of fluid formation. 367

HENDERSON C.G. & UNGAR A. Effect of cholinergic antagonists on sympathetic ganglionic transmission of vasomotor reflexes from the carotid baroreceptors and chemoreceptors of the dog. 379

NEAL Michael J. & WHITE Ralph D. Discrimination between descriptive models of L-glutamate uptake by the retina using non-linear regression analysis. 387

SELZER Michael E. Mechanisms of functional recovery and regeneration after spinal cord transection in larval sea lamprey. 395

HARDING R., JOHNSON P. & MCCLELLAND M.E. Liquid-sensitive laryngeal receptors in the developing sheep, cat and monkey. 409

DRONGELEN Wim van Unitary recordings of near threshold responses of receptor cells in the olfactory mucosa of the frog. 423

DEITMER Joachim W. & ELLIS David Changes in the intracellular sodium activity of sheep heart Purkinje fibres produced by calcium and other divalent cations. 437

FIORENTINI Adriana & MAFFEI L. Selective impairment of contrast sensitivity in kittens exposed to periodic gratings. 455

GOODWIN A.W. & HENRY G.H. The influence of stimulus velocity on the responses of single neurones in the striate cortex. 467

KOVÁCS L. & SCHNEIDER M.F. Contractile activation by voltage clamp depolarization of cut skeletal muscle fibres. 483

PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY

6–7 January 1978

DEMONSTRATIONS

Buller N.P., Garnett R. & Stephens J.A. The use of skin stimulation to produce reversal of motor unit recruitment order during voluntary muscle contraction in man. 1*P*

Ridge R.M.A.P. & Thomson Alex M. Polyneuronal innervation in amphibian skeletal muscle. 2*P*

Carswell F. & Oliver J. A rat model of allergic asthma. 2*P*

Armstrong D.M., Batson D.E., Harvey R.J. & Huett M.R. Techniques employed to study discharges of cerebellar and brain-stem single neurones in cats walking on a moving belt. 3*P*

Biscoe T.J., Lawson S.N., Makepeace A.P.W. & Stirling C.A. Apparatus for the measurement of micrographs and other experimental records. 5*P*

Lawson S.N. A study of the differences between normal and *Sprawler* mouse dorsal root ganglia using the analysis of frequency distributions of neuronal cross-sectional areas. 6*P*

Boss J.M.N. & Jones B.P. Some medical books of physiological interest, from Hippocrates to Ferrier. 7*P*

Caddy K.W.T. The numbers of Purkinje, granule cells and olive neurones in the Lurcher mutant mouse. 8*P*

McDonagh M.J.N. Continuous monitoring of mechanical properties of muscle in organ culture. 8*P*

Owens Rosemary An isolated perfused rat skeletal muscle preparation. 9*P*

Mackenzie I.G. & Webb A.C. A device for determining the receptive field properties of neurones in the visual cerebral cortex of the conscious, mobile cat. 10*P*

Ault B., Evans R.H. & Francis A.A. Isolated hemisected spinal cords of the frog and rat as convenient neuropharmacological test preparations. 11*P*

Buller N.P., Ismail H.M. & Ranatunga K.W. Recording of isometric contractions of human biceps brachii muscle. 11*P*

McHanwell S. & Schild R.F. Comparison of methods for demonstrating retrogradely transported horseradish peroxidase in neurones. 12*P*

Thomas R.C. Construction and testing of recessed-tip pH-sensitive micro-electrodes. 14*P*

Bush B.M.H., DiCaprio R.A. & French A.S. White noise analysis of a non-spiking stretch receptor. 15*P*

Simmers A.J. A preparation for analysis of the neural control of ventilation in crabs. 15*P*

Lacey M. Studies of pulmonary innervation in the rat using horseradish peroxidase as a neuronal marker. 16*P*

Clark J.S. On the fate of iron deposited in the hypothalamus during electrical stimulation. 18*P*

Clarke G. & Merrick Lynda P. A tentative identification of the synaptic transmitters involved in the neural regulation of oxytocin release. 19*P*

Kahn J.A. & Roberts A. The central nervous generation of the swimming rhythm in an amphibian embryo. 20*P*

MacDonald G.A. & Stirling C.A. An inexpensive, remote controlled, focusing device for the Zeiss Op Mi 1 operating microscope. 21*P*

Croker J. & Lewis D.M. A versatile digital stimulator. 21*P*

Pickles V.R. Physiological control-system diagrams. 22*P*

Matthews J. & Miller M. A method for the isolation of parietal cells. 23*P*

Cage P.E. A new force measuring transducer for muscle fibre research. 24*P*

Biscoe T.J., Martin M.R. & Rickets C. A concentric multi-barrelled micro-electrode for use in microiontophoresis. 25*P*

Carlyle A. & Carter Sheila B. *In vivo* recording of uterine activity in the non-pregnant rat. 26*P*

Rogers A.F. A reaction timer. 27*P*

Leendertz J.A., Makepeace A.P.W. & Miller S. Combined monitoring system for body temperature, blood pressure and P_{CO_2} for use during operative procedures on anaesthetized animals. 28*P*

Skidmore R. & Woodcock J.P. Physiological significance of arterial models derived using transcutaneous ultrasonic flowmeters. 29P

Lewis G., Ponte J. & Purves M.J. The time course of exchanges between red cells and extracellular fluid as CO_2 is given up. 30P

Ellis D. & Thomas R.C. The use of Na^+- and pH-sensitive micro-electrodes for direct measurements of the intracellular Na activity or pH in tissues isolated from mammalian heart ventricles. 31P

Harvey R.J. An interactive computer program used in the development of a model of the cerebellum. 31P

Matthews B. Identifying action potential wave forms in neurophysiological recordings. 32P

Lisney S.J.W. Measurement of refractory period in collision experiments. 33P

Harris R.H. & Matthews B. Amplifiers for electrophysiology. 34P

Harris R.H. & Matthews B. Amplifiers for earth-free recording from human subjects. 36P

Milson J.A. & Mitchell J.F. On-line analysis of the electrically evoked field potential in the frog optic tectum. 37P

Brown P.N., Goodship A.E., Lanyon L.E. & Pye C. The use of force platform gait analysis in the assessment of treatment for tendon injury in the racehorse. 38P

Goodship A.E., Lanyon L.E., Nicopoulos A. & O'Connor J.A. A technique for investigating the response of bone to changes in its mechanical environment. 39P

Brown M.W., Leendertz J.A., Makepeace A.P.W. & McCabe B.J. Uses of a UART (universal asynchronous receiver/transmitter) integrated circuit for inexpensively coding large amounts of information on one f.m. tape channel. 40P

Brown M.W. & Leendertz J.A. A simple thermostatic control device. 41P

Roberts M.H.T. & Wallis D.I. Dorsal and ventral root potentials recorded *in vivo* by the sucrose-gap method. 42P

Dibdin G.H. An apparatus for studying diffusion of sugars and organic acids through central plaques *in vitro*. 43P

Bishop M.A. Electron microscopy of pulpal nerves in the rat incisor. 43P

Pearson S. An investigation into the pharmacological properties of the GABA receptors in the frog spinal cord. 43P

Carter C.J. & Pycock C.J. The effect of regional reductions in cerebral 5-hydroxytryptamine concentrations on neuroleptic-induced catalepsy in the rat. 43P

COMMUNICATIONS

Brown A.G. & Fyffe R.E.W. The morphology of Group Ib muscle afferent fibre collaterals. 44P

Miller S., Mitchelson D. & Scott P.D. Coupling of hip and knee movement during forwards and backwards stepping in man. 45P

Caddy K.W.T. Purkinje cells in the Lurcher mutant mouse. 46P

West D.C. & Wolstencroft J.H. Facilitation of raphespinal and other bulbar raphe neurones by stimulation of the sensorimotor cortex. 47P

Spurway N.C. Objective typing of mouse ankle-extensor muscle fibres based on histochemical photometry. 47P

Lewis D.M., Pardoe Margaret J. & Webb Sandra N. The effect of denervation on the mechanical and electrical properties of cat skeletal muscle. 48P

Bakhle Y.S. & Ben-Harari R.R. Effect of the oestrous cycle and exogenous steroids on metabolism of 5-hydroxytryptamine by monoamine oxidase from rat lung. 49P

Rogers A.F. & Sutherland Rosamund J. Non-acclimatization of man to cold. 50P

Harrison F.A. & Saunders R.C. The survival of the adrenalectomized fetus in sheep. 51P

Matthews B.F. Growth of the kidneys in the lactating mouse. 52P

Bishop J.H.V., Green R. & Thomas S. Effects of pregnancy on renal handling of glucose in the rat. 53P

Boss J.M.N. Richard Bright's 'Reports of Medical Cases' (1827) in the development of renal physiology. 54P

Clarac F. Walking patterns of a limb after autotomy in Decapod Crustacea. 55P

Livingston A. & Waterman A. The effects of cholinergic and anticholinergic drugs on ketamine anaesthesia in rats. 56P

Evans R.H. & Watkins J.C. Dual sites for antagonism of excitatory amino acid actions on central neurones. 57P

Cox B., Kerwin R. & Lee T.F. Localization of dopamine-stimulated 3,5-cyclic AMP formation in the rat preoptic anterior hypothalamus in relation to a possible thermoregulatory function for dopamine. 58P

Caulfield M.P. & Kirby P.J. Hyperpolarizations and increases in cyclic AMP produced by catecholamines in sympathetic ganglia are mediated by different receptors. 59P

Harvey R.J. Some properties of a model of the mammalian cerebellum. 60P

Appenteng K., O'Donovan M.J. & Taylor A. Interneurones associated with the motor nucleus of the trigeminal nerve in the cat. 61P

Lovick T.A., West D.C. & Wolstencroft J.H. Bulbar raphe neurones with projections to the spinal trigeminal nucleus and the lumbar cord in the cat. 61P

Cody Frederick W.J. & Richardson Helen C. Responses of cerebellar interpositus nuclear neurones to trigeminal inputs in the cat. 62P

Dyer R.G., Mayes Linda C., Ter Haar M.B. & Yates J.O. Ovulation in the rat: duration of hypothalamic activation, and not frequency, is the critical parameter. 63P

Docherty R.J. & McQueen D.S. Inhibitory effects of acetylcholine and dopamine on rabbit chemoreceptors. 64P

Jordan D. & Spyer K.M. The excitability of sinus nerve afferent terminals during the respiratory cycle. 66P

Mathers D.A. & Thesleff S. Evidence suggesting that acetylcholine acts as a neurotrophic factor. 67P

Higgins A.J. & Neal M.J. The effects of potassium depolarization on the metabolism of [^{3}H]choline by rat sympathetic ganglia. 67P

Flitney F.W., Lamb J.F. & Singh J. Effects of exogenous ATP on contractile force and intracellular cyclic nucleotide levels in the hypodynamic frog ventricle. 69P

Standen N.B. & Stanfield P.R. Potential-dependent blockade by Ba^{2+} of resting potassium permeability of frog sartorius. 70P

Sepúlveda F.V. & Smith M.W. Neutral amino acid transport by rabbit ileum. 71P

Kelly S.S. Dietary restriction and miniature end-plate potentials. 72P

Daniel P.M., Love E.R. & Pratt O.E. Thyroid hormones and the movement of amino acids between skeletal muscle and the blood. 73P

Dobson A. Tritiated water clearance and capillary blood flow to the epithelium of the rumen. 74P

Dockray G.J., Hopkins C.R. & Vaillant Camille Identification of the NH_2-terminal tryptic peptide of big gastrin in hog antral mucosa. 75P

Gardner Carol B. & McGrath J.C. Depressor responses to stimulation of the sacral outflow in the pithed rat. 76P

Jansen A.H., Purves M.J. & Tan E.D. Carotid body chemoreceptors in the mature sheep fetus re-examined. 77P

Chapman B.J. & Munday K.A. Tachyphylaxis of the pressor response to angiotensin II. 78P

Poole-Wilson P.A. Inhibition of calcium uptake by acidosis in the myocardium of the rabbit. 79P

Woodward B. Effects of renal perfusate flow on systemic blood pressure in the rat. 80P

Albers C., Götz K.H. & Welbers P. Adaptation of blood gases to diurnal temperature changes in a desert lizard, *Uromastyx ancanthinurus*. 80P

McHanwell S. Abnormal transport of horseradish peroxidase from the medial gastrocnemius muscle in dystrophic mice. 81P

AUTHOR INDEX

(D) Denotes Demonstration (T) Title only

ALBERS C., GÖTZ K.H. & WELBERS P. Adaptation of blood gases to diurnal temperature changes in a desert lizard, *Uromastyx ancanthinurus*. 80*P*

APPENTENG K., O'DONOVAN M.J. & TAYLOR A. Interneurones associated with the motor nucleus of the trigeminal nerve in the cat. 61*P*

ARMSTRONG D.M., BATSON D.E., HARVEY R.J. & HUETT M.R. Techniques employed to study discharges of cerebellar and brain-stem single neurones in cats walking on a moving belt. (D) 3*P*

AULT B., EVANS R.H. & FRANCIS A.A. Isolated hemisected spinal cords of the frog and rat as convenient neuropharmacological test preparations. (D) (T) 11*P*

BAKHLE Y.S. & BEN-HARARI R.R. Effect of the oestrous cycle and exogenous steroids on metabolism of 5-hydroxytryptamine by monoamine oxidase from rat lung. 49*P*

BARER Gwenda R., HERGET J., SLOAN P.J.M. & SUGGETT A.J. The effect of acute and chronic hypoxia on thoracic gas volume in anaesthetized rats. 177

BATSON D.E. *see* ARMSTRONG D.M., BATSON D.E., HARVEY R.J. & HUETT M.R. Techniques employed to study discharges of cerebellar and brain-stem single neurones in cats walking on a moving belt. (D) 3*P*

BEN-HARARI R.R. *see* BAKHLE Y.S. & BEN-HARARI R.R. Effect of the oestrous cycle and exogenous steroids on metabolism of 5-hydroxytryptamine by monoamine oxidase from rat lung. 49*P*

BISCOE T.J., LAWSON S.N., MAKEPEACE A.P.W. & STIRLING C.A. Apparatus for the measurement of micrographs and other experimental records. (D) 5*P*

BISCOE T.J., MARTIN M.R. & RICKETS C. A concentric multi-barrelled micro-electrode for use in microiontophoresis. (D) 25*P*

BISHOP J.H.V., GREEN R. & THOMAS S. Effects of pregnancy on renal handling of glucose in the rat. 53*P*

BISHOP M.A. Electron microscopy of pulpal nerves in the rat incisor. (D) (T) 43*P*

BLAKELEY A.G.H. & NICOL C.J.M. Accumulation of amines by rabbit erythrocytes *in vitro*. 77

BLINKS J.R., RÜDEL R. & TAYLOR S.R. Calcium transients in isolated amphibian skeletal muscle fibres: detection with aequorin. 291

BORG Jörgen, GRIMBY Lennart & HANNERZ Jan Axonal conduction velocity and voluntary discharge properties of individual short toe extensor motor units in man. 143

BOSS J.M.N. & JONES B.P. Some medical books of physiological interest, from Hippocrates to Ferrier. (D) 7*P*

BOSS J.M.N. Richard Bright's 'Reports of Medical Cases' (1827) in the development of renal physiology. 54*P*

BROWN A.G., ROSE P.K. & SNOW P.J. Morphology and organization of axon collaterals from afferent fibres of slowly adapting type I units in cat spinal cord. 15

BROWN A.G. & FYFFE R.E.W. The morphology of Group Ib muscle afferent fibre collaterals. 44*P*

BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

BROWN M.W., LEENDERTZ J.A., MAKEPEACE A.P.W. & McCABE B.J. Uses of a UART (universal asynchronous receiver/transmitter) integrated circuit for inexpensively coding large amounts of information on one f.m. tape channel. (D) 40*P*

BROWN M.W. & LEENDERTZ J.A. A simple thermostatic control device. (D) 41*P*

BROWN P.N., GOODSHIP A.E., LANYON L.E. & PYE C. The use of force platform gait analysis in the assessment of treatment for tendon injury in the racehorse. (D) 38*P*

BULLER N.P., GARNETT R. & STEPHENS J.A. The use of skin stimulation to produce reversal of motor unit recruitment order during voluntary muscle contraction in man. (D) 1*P*

BULLER N.P., ISMAIL H.M. & RANATUNGA K.W. Recording of isometric contractions of human biceps brachii muscle. (D) 11*P*

BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle activity in man during shortening and lengthening contractions. 131

BUSH B.M.H., DICAPRIO R.A. & FRENCH A.S. White noise analysis of a non-spiking stretch receptor. (D) 15*P*

CADDY K.W.T. The numbers of Purkinje, granule cells and olive neurones in the Lurcher mutant mouse. (D) 8*P*

CADDY K.W.T. Purkinje cells in the Lurcher mutant mouse. 46*P*

CAGE P.E. A new force measuring transducer for muscle fibre research. (D) 24*P*

CARLYLE A. & CARTER Sheila B. *In vivo* recording of uterine activity in the non-pregnant rat. (D) 26*P*

CARSWELL F. & OLIVER J. A rat model of allergic asthma. (D) 2*P*

CARTER C ⁷. & PYCOCK C.J. The effect of regional reductions in cerebral 5-hydroxytryptamine concentrations on neuroleptic-induced catalepsy in the rat. (D) (T) 43*P*

CARTER Sheila B. *see* CARLYLE A. & CARTER Sheila B. *In vivo* recording of uterine activity in the non-pregnant rat. (D) 26*P*

CAULFIELD M.P. & KIRBY P.J. Hyperpolarizations and increases in cyclic AMP produced by catecholamines in sympathetic ganglia are mediated by different receptors. 59*P*

CHAPMAN B.J. & MUNDAY K.A. Tachyphylaxis of the pressor response to angiotensin II. 78*P*

CLARAC F. Walking patterns of a limb after autotomy in Decapod Crustacea. 55*P*

CLARK J.S. On the fate of iron deposited in the hypothalamus during electrical stimulation. (D) 18*P*

CLARKE G. & MERRICK Lynda P. A tentative identification of the synaptic transmitters involved in the neural regulation of oxytocin release. (D) 19*P*

CODY Frederick W.J. & RICHARDSON Helen C. Responses of cerebellar interpositus nuclear neurones to trigeminal inputs in the cat. 62*P*

COX B., KERWIN R. & LEE T.F. Localization of dopamine-stimulated 3,5-cyclic AMP formation in the rat preoptic anterior hypothalamus in relation to a possible thermoregulatory function for dopamine. 58*P*

COY D.H. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

CRANSTON W.I., HELLON R.F. & TOWNSEND Yvonne Thermal stimulation of intra-abdominal veins in conscious rabbits. 49

CROKER J. & LEWIS D.M. A versatile digital stimulator. (D) 21*P*

DANIEL P.M., LOVE E.R. & PRATT O.E. Thyroid hormones and the movement of amino acids between skeletal muscle and the blood. 73*P*

DEITMER Joachim W. & ELLIS David Changes in the intracellular sodium activity of sheep heart Purkinje fibres produced by calcium and other divalent cations. 437

DEWHURST D.G., HADI N.A., HUTSON D. & SCRATCHERD T. The permeability of the secretin stimulated exocrine pancreas to non-electrolytes. 103

DIBDIN G.H. An apparatus for studying diffusion of sugars and organic acids through central plaques *in vitro*. (D) (T) 43*P*

DICAPRIO R.A. *see* BUSH B.M.H., DICAPRIO R.A. & FRENCH A.S. White noise analysis of a non-spiking stretch receptor. (D) 15*P*

DOBSON A. Tritiated water clearance and capillary blood flow to the epithelium of the rumen. 74*P*

DOCHERTY R.J. & MCQUEEN D.S. Inhibitory effects of acetylcholine and dopamine on rabbit chemoreceptors. 64*P*

DOCKRAY G.J., HOPKINS C.R. & VAILLANT Camille Identification of the NH_2-terminal tryptic peptide of big gastrin in hog antral mucosa. 75*P*

DOSTROVSKY J.O. & HELLON R.F. The prepresentation of facial temperature in the caudal trigeminal nucleus of the cat. 29

DRONGELEN Wim Van Unitary recordings of near threshold responses of receptor cells in the olfactory mucosa of the frog. 423

DYER R.G., MAYES Linda C., TER HAAR M.B. & YATES J.O. Ovulation in the rat: duration of hypothalamic activation, and not frequency, is the critical parameter. 63*P*

EKLUND Brita & KAIJSER Lennart Blood flow in the resting forearm during prolonged contralateral isometric handgrip at maximal effort. 359

ELLIS D. & THOMAS R.C. The use of Na^+- and pH-sensitive micro-electrodes for direct measurements of the intracellular Na activity or pH in tissues isolated from mammalian heart ventricles. (D) (T) 31*P*

ELLIS David *see* DEITMER Joachim W. & ELLIS David Changes in the intracellular sodium activity of sheep heart Purkinje fibres produced by calcium and other divalent cations. 437

ESSEN D.C. Van & ZEKI S.M. The topographic organization of rhesus monkey prestriate cortex. 193

EVANS R.H. *see* AULT B., EVANS R.H. & FRANCIS A.A. Isolated hemisected spinal cords of the frog and rat as convenient neuropharmacological test preparations. (D) (T) 11*P*

EVANS R.H. & WATKINS J.C. Dual sites for antagonism of excitatory amino acid actions on central neurones. 57*P*

FIORENTINI Adriana & MAFFEI L. Selective impairment of contrast sensitivity in kittens exposed to periodic gratings. 455

FLITNEY F.W., LAMB J.F. & SINGH J. Effects of exogenous ATP on contractile force and intracellular cyclic nucleotide levels in the hypodynamic frog ventricle. 69*P*

FRANCIS A.A. *see* AULT B., EVANS R.H. & FRANCIS A.A. Isolated hemisected spinal cords of the frog and rat as convenient neuropharmacological test preparations. (D) (T) 11*P*

FRENCH A.S. *see* BUSH B.M.H., DiCAPRIO R.A. & FRENCH A.S. White noise analysis of a non-spiking stretch receptor. (D) 15*P*

FYFFE R.E.W. *see* BROWN A.G. & FYFFE R.E.W. The morphology of Group Ib muscle afferent fibre collaterals. 44*P*

GARDNER Carol B. & McGRATH J.C. Depressor responses to stimulation of the sacral outflow in the pithed rat. 76*P*

GARNETT R. *see* BULLER N.P., GARNETT R. & STEPHENS J.A. The use of skin stimulation to produce reversal of motor unit recruitment order during voluntary muscle contraction in man. (D) 1*P*

GERDES Ulrik, KRISTENSEN Jørn, MØLLER Jesper V. & SHEIKH M. Iqbal Renal handling of phenol red. III. Bidirectional transport. 115

GIBSON A.T. & SEGAL M.B. A study of the composition of pericardial fluid, with special reference to the probable mechanism of fluid formation. 367

GOMEZ-PAN A. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

GOODSHIP A.E. *see* BROWN P.N., GOODSHIP A.E., LANYON L.E. & PYE C. The use of force platform gait analysis in the assessment of treatment for tendon injury in the racehorse. (D) 38*P*

GOODSHIP A.E., LANYON L.E., NICOPOULOS A. & O'CONNOR J.A. A technique for investigating the response of bone to changes in its mechanical environment. (D) 39*P*

GOODWIN A.W. & HENRY G.H. The influence of stimulus velocity on the responses of single neurones in the striate cortex. 467

GÖTZ K.H. *see* ALBERS C., GÖTZ K.H. & WELBERS P. Adaptation of blood gases to diurnal temperature changes in a desert lizard, *Uromastyx ancanthinurus*. 80*P*

GREEN R. *see* BISHOP J.H.V., GREEN R. & THOMAS S. Effects of pregnancy on renal handling of glucose in the rat. 53*P*

GRIMBY Lennart *see* BORG Jörgen, GRIMBY Lennart & HANNERZ Jan Axonal conduction velocity and voluntary discharge properties of individual short toe extensor motor units in man. 143

HADI N.A. *see* DEWHURST D.G., HADI N.A., HUTSON D. & SCRATCHERD T. The permeability of the secretin stimulated exocrine pancreas to non-electrolytes. 103

HAGBARTH Karl-Erik *see* BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle activity in man during shortening and lengthening contractions. 131

HANNERZ Jan *see* BORG Jörgen, GRIMBY Lennart & HANNERZ Jan Axonal conduction velocity and voluntary discharge properties of individual short toe extensor motor units in man. 143

HARDING R., JOHNSON P. & McCLELLAND M.E. Liquid-sensitive laryngeal receptors in the developing sheep, cat and monkey. 409

HARRISON F.A. & SAUNDERS R.C. The survival of the adrenalectomized fetus in sheep. 51*P*

HARRIS R.H. & MATTHEWS B. Amplifiers for electrophysiology. (D) 34*P*

HARRIS R.H. & MATTHEWS B. Amplifiers for earth-free recording from human subjects. (D) 36*P*

HARVEY R.J. *see* ARMSTRONG D.M., BATSON D.E., HARVEY R.J. & HUETT M.R. Techniques employed to study discharges of cerebellar and brain-stem single neurones in cats walking on a moving belt. (D) 3*P*

HARVEY R.J. An interactive computer program used in the development of a model of the cerebellum. (D) 31*P*

HARVEY R.J. Some properties of a model of the mammalian cerebellum. 60*P*

HELLON R.F. *see* DOSTROVSKY J.O. & HELLON R.F. The prepresentation of facial temperature in the caudal trigeminal nucleus of the cat. 29

HELLON R.F. *see* CRANSTON W.I., HELLON R.F. & TOWNSEND Yvonne Thermal stimulation of intra-abdominal veins in conscious rabbits. 49

HENDERSON C.G. & UNGAR A. Effect of cholinergic antagonists on sympathetic ganglionic transmission of vasomotor reflexes from the carotid baroreceptors and chemoreceptors of the dog. 379

HENRY G.H. *see* GOODWIN A.W. & HENRY G.H. The influence of stimulus velocity on the responses of single neurones in the striate cortex. 467

HERGET J. *see* BARER Gwenda R., HERGET J., SLOAN P.J.M. & SUGGETT A.J. The effect of acute and chronic hypoxia on thoracic gas volume in anaesthetized rats. 177

HIGGINS A.J. & NEAL M.J. The effects of potassium depolarization on the metabolism of [^{3}H]choline by rat sympathetic ganglia. 67*P*

HIRST B.H. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

HOPKINS C.R. *see* DOCKRAY G.J., HOPKINS C.R. & VAILLANT Camille Identification of the NH_2-terminal tryptic peptide of big gastrin in hog antral mucosa. 75*P*

HUETT M.R. *see* ARMSTRONG D.M., BATSON D.E., HARVEY R.J. & HUETT M.R. Techniques employed to study discharges of cerebellar and brain-stem single neurones in cats walking on a moving belt. (D) 3*P*

HUNTER M. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

HUTSON D. *see* DEWHURST D.G., HADI N.A., HUTSON D. & SCRATCHERD T. The permeability of the secretin stimulated exocrine pancreas to non-electrolytes. 103

ISMAIL H.M. *see* BULLER N.P., ISMAIL H.M. & RANATUNGA K.W. Recording of isometric contractions of human biceps brachii muscle. (D) 11*P*

JANSEN A.H., PURVES M.J. & TAN E.D. Carotid body chemoreceptors in the mature sheep fetus re-examined. 77*P*

JOHNSON P. *see* HARDING R., JOHNSON P. & MCCLELLAND M.E. Liquid-sensitive laryngeal receptors in the developing sheep, cat and monkey. 409

JONES B.P. *see* BOSS J.M.N. & JONES B.P. Some medical books of physiological interest, from Hippocrates to Ferrier. (D) 7*P*

JORDAN D. & SPYER K.M. The excitability of sinus nerve afferent terminals during the respiratory cycle. 66*P*

KAHN J.A. & ROBERTS A. The central nervous generation of the swimming rhythm in an amphibian embryo. (D) 20*P*

KAIJSER Lennart *see* EKLUND Brita & KAIJSER Lennart Blood flow in the resting forearm during prolonged contralateral isometric handgrip at maximal effort. 359

KELLY S.S. Dietary restriction and miniature end-plate potentials. 72*P*

KERWIN R. *see* COX B., KERWIN R. & LEE T.F. Localization of dopamine-stimulated 3,5-cyclic AMP formation in the rat preoptic anterior hypothalamus in relation to a possible thermoregulatory function for dopamine. 58*P*

KIRBY P.J. *see* CAULFIELD M.P. & KIRBY P.J. Hyperpolarizations and increases in cyclic AMP produced by catecholamines in sympathetic ganglia are mediated by different receptors. 59*P*

KOVÁCS L. & SCHNEIDER M.F. Contractile activation by voltage clamp depolarization of cut skeletal muscle fibres. 483

KRISTENSEN Jørn *see* GERDES Ulrik, KRISTENSEN Jørn, MØLLER Jesper V. & SHEIKH M. Iqbal Renal handling of phenol red. III. Bidirectional transport. 115

LACEY M. Studies of pulmonary innervation in the rat using horseradish peroxidase as a neuronal marker. (D) 16*P*

LAMB J.F. *see* FLITNEY F.W., LAMB J.F. & SINGH J. Effects of exogenous ATP on contractile force and intracellular cyclic nucleotide levels in the hypodynamic frog ventricle. 69*P*

LANYON L.E. *see* BROWN P.N., GOODSHIP A.E., LANYON L.E. & PYE C. The use of force platform gait analysis in the assessment of treatment for tendon injury in the racehorse. (D) 38*P*

LANYON L.E. *see* GOODSHIP A.E., LANYON L.E., NICOPOULOS A. & O'CONNOR J.A. A technique for investigating the response of bone to changes in its mechanical environment. (D) 39*P*

LAWSON S.N. *see* BISCOE T.J., LAWSON S.N., MAKEPEACE A.P.W. & STIRLING C.A. Apparatus for the measurement of micrographs and other experimental records. (D) 5*P*

LAWSON S.N. A study of the differences between normal and *Sprawler* mouse dorsal root ganglia using the analysis of frequency distributions of neuronal cross-sectional areas. (D) 6*P*

LEENDERTZ J.A., MAKEPEACE A.P.W. & MILLER S. Combined monitoring system for body temperature, blood pressure and P_{CO_2} for use during operative procedures on anaesthetized animals. (D) 28*P*

LEENDERTZ J.A. *see* BROWN M.W., LEENDERTZ J.A., MAKEPEACE A.P.W. & MCCABE B.J. Uses of a UART (universal asynchronous receiver/transmitter) integrated circuit for inexpensively coding large amounts of information on one f.m. tape channel. (D) 40*P*

LEENDERTZ J.A. *see* BROWN M.W. & LEENDERTZ J.A. A simple thermostatic control device. (D) 41*P*

LEE T.F. *see* COX B., KERWIN R. & LEE T.F. Localization of dopamine-stimulated 3,5-cyclic AMP formation in the rat preoptic anterior hypothalamus in relation to a possible thermoregulatory function for dopamine. 58*P*

LEWIS D.M. *see* CROKER J. & LEWIS D.M. A versatile digital stimulator. (D) 21*P*

LEWIS D.M., PARDOE Margaret J. & WEBB Sandra N. The effect of denervation on the mechanical and electrical properties of cat skeletal muscle. 48*P*

LEWIS G., PONTE J. & PURVES M.J. The time course of exchanges between red cells and extracellular fluid as CO_2 is given up. (D) 30*P*

LISNEY S.J.W. Measurement of refractory period in collision experiments. (D) 33*P*

LIVINGSTON A. & WATERMAN A. The effects of cholinergic and anticholinergic drugs on ketamine anaesthesia in rats. 56*P*

LÖFSTEDT Lars *see* BURKE David, HAGBARTH Karl-Erik & LÖFSTEDT Lars Muscle spindle activity in man during shortening and lengthening contractions. 131

LOVE E.R. *see* DANIEL P.M., LOVE E.R. & PRATT O.E. Thyroid hormones and the movement of amino acids between skeletal muscle and the blood. 73*P*

LOVICK T.A., WEST D.C. & WOLSTENCROFT J.H. Bulbar raphe neurones with projections to the spinal trigeminal nucleus and the lumbar cord in the cat. 61*P*

MCCABE B.J. *see* BROWN M.W., LEENDERTZ J.A., MAKEPEACE A.P.W. & MCCABE B.J. Uses of a UART (universal asynchronous receiver/transmitter) integrated circuit for inexpensively coding large amounts of information on one f.m. tape channel. (D) 40*P*

MCCLELLAND M.E. *see* HARDING R., JOHNSON P. & MCCLELLAND M.E. Liquid-sensitive laryngeal receptors in the developing sheep, cat and monkey. 409

MCDONAGH M.J.N. Continuous monitoring of mechanical properties of muscle in organ culture. (D) 8*P*

MACDONALD G.A. & STIRLING C.A. An inexpensive, remote controlled, focusing device for the Zeiss Op Mi 1 operating microscope. (D) 21*P*

MCGRATH J.C. *see* GARDNER Carol B. & MCGRATH J.C. Depressor responses to stimulation of the sacral outflow in the pithed rat. 76*P*

MCHANWELL S. & SCHILD R.F. Comparison of methods for demonstrating retrogradely transported horseradish peroxidase in neurones. (D) 12*P*

MCHANWELL S. Abnormal transport of horseradish peroxidase from the medial gastrocnemius muscle in dystrophic mice. 81*P*

MACKENZIE I.G. & WEBB A.C. A device for determining the receptive field properties of neurones in the visual cerebral cortex of the conscious, mobile cat. (D) 10*P*

MCQUEEN D.S. *see* DOCHERTY R.J. & MCQUEEN D.S. Inhibitory effects of acetylcholine and dopamine on rabbit chemoreceptors. 64*P*

MAFFEI L. *see* FIORENTINI Adriana & MAFFEI L. Selective impairment of contrast sensitivity in kittens exposed to periodic gratings. 455

MAKEPEACE A.P.W. *see* BISCOE T.J., LAWSON S.N., MAKEPEACE A.P.W. & STIRLING C.A. Apparatus for the measurement of micrographs and other experimental records. (D) 5*P*

MAKEPEACE A.P.W. *see* LEENDERTZ J.A., MAKEPEACE A.P.W. & MILLER S. Combined monitoring system for body temperature, blood pressure and P_{CO_2} for use during operative procedures on anaesthetized animals. (D) 28*P*

MAKEPEACE A.P.W. *see* BROWN M.W., LEENDERTZ J.A., MAKEPEACE A.P.W. & MCCABE B.J. Uses of a UART (universal asynchronous receiver/transmitter) integrated circuit for inexpensively coding large amounts of information on one f.m. tape channel. (D) 40*P*

MARTIN M.R. *see* BISCOE T.J., MARTIN M.R. & RICKETS C. A concentric multi-barrelled microelectrode for use in microiontophoresis. (D) 25*P*

MATHERS D.A. & THESLEFF S. Evidence suggesting that acetylcholine acts as a neurotrophic factor. 67*P*

MATTHEWS B. Identifying action potential wave forms in neurophysiological recordings. (D) 32*P*

MATTHEWS B. *see* HARRIS R.H. & MATTHEWS B. Amplifiers for electrophysiology. (D) 34*P*

MATTHEWS B. *see* HARRIS R.H. & MATTHEWS B. Amplifiers for earth-free recording from human subjects. (D) 36*P*

MATTHEWS B.F. Growth of the kidneys in the lactating mouse. 52*P*

MATTHEWS J. & MILLER M. A method for the isolation of parietal cells. (D) 23*P*

MAYES Linda C. *see* DYER R.G., MAYES Linda C., TER HAAR M.B. & YATES J.O. Ovulation in the rat: duration of hypothalamic activation, and not frequency, is the critical parameter. 63*P*

MERRICK Lynda P. *see* CLARKE G. & MERRICK Lynda P. A tentative identification of the synaptic transmitters involved in the neural regulation of oxytocin release. (D) 19*P*

MEYERS C. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

MILLER M. *see* MATTHEWS J. & MILLER M. A method for the isolation of parietal cells. (D) 23*P*

MILLER S. *see* LEENDERTZ J.A., MAKEPEACE A.P.W. & MILLER S. Combined monitoring system for body temperature, blood pressure and P_{CO_2} for use during operative procedures on anaesthetized animals. (D) 28*P*

MILLER S., MITCHELSON D. & SCOTT P.D. Coupling of hip and knee movement during forwards and backwards stepping in man. 45*P*

MILSON J.A. & MITCHELL J.F. On-line analysis of the electrically evoked field potential in the frog optic tectum. (D) 37*P*

MITCHELL J.F. *see* MILSON J.A. & MITCHELL J.F. On-line analysis of the electrically evoked field potential in the frog optic tectum. (D) 37*P*

MITCHELSON D. *see* MILLER S., MITCHELSON D. & SCOTT P.D. Coupling of hip and knee movement during forwards and backwards stepping in man. 45*P*

MØLLER Jesper V. *see* GERDES Ulrik, KRISTENSEN Jørn, MØLLER Jesper V. & SHEIKH M. Iqbal Renal handling of phenol red. III. Bidirectional transport. 115

MUNDAY K.A. *see* CHAPMAN B.J. & MUNDAY K.A. Tachyphylaxis of the pressor response to angiotensin II. 78*P*

NEAL Michael J. & WHITE Ralph D. Discrimination between descriptive models of L-glutamate uptake by the retina using non-linear regression analysis. 387

NEAL M.J. *see* HIGGINS A.J. & NEAL M.J. The effects of potassium depolarization on the metabolism of [^{3}H]choline by rat sympathetic ganglia. 67*P*

NEHER Erwin & STEINBACH Joe Henry Local anaesthetics transiently block currents through single acetylcholine-receptor channels. 153

NICOL C.J.M. *see* BLAKELEY A.G.H. & NICOL C.J.M. Accumulation of amines by rabbit erythrocytes *in vitro*. 77

NICOPOULOS A. *see* GOODSHIP A.E., LANYON L.E., NICOPOULOS A. & O'CONNOR J.A. A technique for investigating the response of bone to changes in its mechanical environment. (D) 39*P*

NJÅ Arild & PURVES Dale The effects of nerve growth factor and its antiserum on synapses in the superior cervical ganglion of the guinea-pig. 53

O'CONNOR J.A. *see* GOODSHIP A.E., LANYON L.E., NICOPOULOS A. & O'CONNOR J.A. A technique for investigating the response of bone to changes in its mechanical environment. (D) 39*P*

O'DONOVAN M.J. *see* APPENTENG K., O'DONOVAN M.J. & TAYLOR A. Interneurones associated with the motor nucleus of the trigeminal nerve in the cat. 61*P*

OLIVER J. *see* CARSWELL F. & OLIVER J. A rat model of allergic asthma. (D) 2*P*

OWENS Rosemary An isolated perfused rat skeletal muscle preparation. (D) 9*P*

PARDOE Margaret J. *see* LEWIS D.M., PARDOE Margaret J. & WEBB Sandra N. The effect of denervation on the mechanical and electrical properties of cat skeletal muscle. 48*P*

PEARSON S. An investigation into the pharmacological properties of the GABA receptors in the frog spinal cord. (D) (T) 43P

PICKLES V.R. Physiological control-system diagrams. (D) 22P

PONTE J. *see* LEWIS G., PONTE J. & PURVES M.J. The time course of exchanges between red cells and extracellular fluid as CO_2 is given up. (D) 30P

POOLE-WILSON P.A. Inhibition of calcium uptake by acidosis in the myocardium of the rabbit. 79P

PRATT O.E. *see* DANIEL P.M., LOVE E.R. & PRATT O.E. Thyroid hormones and the movement of amino acids between skeletal muscle and the blood. 73P

PURVES Dale *see* NJÅ Arild & PURVES Dale The effects of nerve growth factor and its antiserum on synapses in the superior cervical ganglion of the guinea-pig. 53

PURVES M.J. *see* LEWIS G., PONTE J. & PURVES M.J. The time course of exchanges between red cells and extracellular fluid as CO_2 is given up. (D) 30P

PURVES M.J. *see* JANSEN A.H., PURVES M.J. & TAN E.D. Carotid body chemoreceptors in the mature sheep fetus re-examined. 77P

PYCOCK C.J. *see* CARTER C.J. & PYCOCK C.J. The effect of regional reductions in cerebral 5-hydroxytryptamine concentrations on neuroleptic-induced catalepsy in the rat. (D) (T) 43P

PYE C. *see* BROWN P.N., GOODSHIP A.E., LANYON L.E. & PYE C. The use of force platform gait analysis in the assessment of treatment for tendon injury in the racehorse. (D) 38P

RANATUNGA K.W. *see* BULLER N.P., ISMAIL H.M. & RANATUNGA K.W. Recording of isometric contractions of human biceps brachii muscle. (D) 11P

REED J.D. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

RICHARDSON Helen C. *see* CODY Frederick W.J. & RICHARDSON Helen C. Responses of cerebellar interpositus nuclear neurones to trigeminal inputs in the cat. 62P

RICKETS C. *see* BISCOE T.J., MARTIN M.R. & RICKETS C. A concentric multi-barrelled micro-electrode for use in microiontophoresis. (D) 25P

RIDGE R.M.A.P. & THOMSON Alex M. Polyneuronal innervation in amphibian skeletal muscle. (D) 2P

ROBERTS A. *see* KAHN J.A. & ROBERTS A. The central nervous generation of the swimming rhythm in an amphibian embryo. (D) 20P

ROBERTS M.H.T. & WALLIS D.I. Dorsal and ventral root potentials recorded *in vivo* by the sucrose-gap method. (D) 42P

ROGERS A.F. A reaction timer. (D) 27P

ROGERS A.F. & SUTHERLAND Rosamund J. Non-acclimatization of man to cold. 50P

ROSE P.K. *see* BROWN A.G., ROSE P.K. & SNOW P.J. Morphology and organization of axon collaterals from afferent fibres of slowly adapting type I units in cat spinal cord. 15

RÜDEL R. *see* BLINKS J.R., RÜDEL R. & TAYLOR S.R. Calcium transients in isolated amphibian skeletal muscle fibres: detection with aequorin. 291

RURAK D.W. Plasma vasopressin levels during hypoxaemia and the cardiovascular effects of exogenous vasopressin in foetal and adult sheep. 341

SAUNDERS R.C. *see* HARRISON F.A. & SAUNDERS R.C. The survival of the adrenalectomized fetus in sheep. 51P

SCHALLY A.V. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

SCHILD R.F. *see* MCHANWELL S. & SCHILD R.F. Comparison of methods for demonstrating retrogradely transported horseradish peroxidase in neurones. (D) 12P

SCHNEIDER M.F. *see* KOVÁCS L. & SCHNEIDER M.F. Contractile activation by voltage clamp depolarization of cut skeletal muscle fibres. 483

SCOTT P.D. *see* MILLER S., MITCHELSON D. & SCOTT P.D. Coupling of hip and knee movement during forwards and backwards stepping in man. 45P

SCRATCHERD T. *see* DEWHURST D.G., HADI N.A., HUTSON D. & SCRATCHERD T. The permeability of the secretin stimulated exocrine pancreas to non-electrolytes. 103

SEGAL M.B. *see* GIBSON A.T. & SEGAL M.B. A study of the composition of pericardial fluid, with special reference to the probable mechanism of fluid formation. 367

SELZER Michael E. Mechanisms of functional recovery and regeneration after spinal cord transection in larval sea lamprey. 395

SEPÚLVEDA F.V. & SMITH M.W. Neutral amino acid transport by rabbit ileum. 71*P*

SHAW B. *see* BROWN M.P., COY D.H., GOMEZ-PAN A., HIRST B.H., HUNTER M., MEYERS C., REED J.D., SCHALLY A.V. & SHAW B. Structure–activity relationships of eighteen somatostatin analogues on gastric secretion. 1

SHEIKH M. Iqbal *see* GERDES Ulrik, KRISTENSEN Jørn, MØLLER Jesper V. & SHEIKH M. Iqbal Renal handling of phenol red. III. Bidirectional transport. 115

SIMMERS A.J. A preparation for analysis of the neural control of ventilation in crabs. (D) 15*P*

SINGH J. *see* FLITNEY F.W., LAMB J.F. & SINGH J. Effects of exogenous ATP on contractile force and intracellular cyclic nucleotide levels in the hypodynamic frog ventricle. 69*P*

SKIDMORE R. & WOODCOCK J.P. Physiological significance of arterial models derived using transcutaneous ultrasonic flowmeters. (D) 29*P*

SLOAN P.J.M. *see* BARER Gwenda R., HERGET J., SLOAN P.J.M. & SUGGETT A J. The effect of acute and chronic hypoxia on thoracic gas volume in anaesthetized rats. 177

SMITH M.W. *see* SEPÚLVEDA F.V. & SMITH M.W. Neutral amino acid transport by rabbit ileum. 71*P*

SNOW P.J. *see* BROWN A.G., ROSE P.K. & SNOW P.J. Morphology and organization of axon collaterals from afferent fibres of slowly adapting type I units in cat spinal cord. 15

SPURWAY N.C. Objective typing of mouse ankle-extensor muscle fibres based on histochemical photometry. 47*P*

SPYER K.M. *see* JORDAN D. & SPYER K.M. The excitability of sinus nerve afferent terminals during the respiratory cycle. 66*P*

STANDEN N.B. & STANFIELD P.R. Potential-dependent blockade by Ba^{2+} of resting potassium permeability of frog sartorius. 70*P*

STANFIELD P.R. *see* STANDEN N.B. & STANFIELD P.R. Potential-dependent blockade by Ba^{2+} of resting potassium permeability of frog sartorius. 70*P*

STEINBACH Joe Henry *see* NEHER Erwin & STEINBACH Joe Henry Local anaesthetics transiently block currents through single acetylcholine-receptor channels. 153

STEPHENS J.A. *see* BULLER N.P., GARNETT R. & STEPHENS J.A. The use of skin stimulation to produce reversal of motor unit recruitment order during voluntary muscle contraction in man. (D) 1*P*

STIRLING C.A. *see* BISCOE T.J., LAWSON S.N., MAKEPEACE A.P.W. & STIRLING C.A. Apparatus for the measurement of micrographs and other experimental records. (D) 5*P*

STIRLING C.A. *see* MacDONALD G.A. & STIRLING C.A. An inexpensive, remote controlled, focusing device for the Zeiss Op Mi 1 operating microscope. (D) 21*P*

SUGGETT A.J. *see* BARER Gwenda R., HERGET J., SLOAN P.J.M. & SUGGETT A.J. The effect of acute and chronic hypoxia on thoracic gas volume in anaesthetized rats. 177

SUTHERLAND Rosamund J. *see* ROGERS A.F. & SUTHERLAND Rosamund J. Non-acclimatization of man to cold. 50*P*

SZURSZEWSKI J.H. A study of the canine gastric action potential in the presence of tetraethylammonium chloride. 91

TAN E.D. *see* JANSEN A.H., PURVES M.J. & TAN E.D. Carotid body chemoreceptors in the mature sheep fetus re-examined. 77*P*

TAYLOR A. *see* APPENTENG K., O'DONOVAN M.J. & TAYLOR A. Interneurones associated with the motor nucleus of the trigeminal nerve in the cat. 61*P*

TAYLOR S.R. *see* BLINKS J.R., RÜDEL R. & TAYLOR S.R. Calcium transients in isolated amphibian skeletal muscle fibres: detection with aequorin. 291

TER HAAR M.B. *see* DYER R.G., MAYES Linda C., TER HAAR M.B. & YATES J.O. Ovulation in the rat: duration of hypothalamic activation, and not frequency, is the critical parameter. 63*P*

THESLEFF S. *see* MATHERS D.A. & THESLEFF S. Evidence suggesting that acetylcholine acts as a neurotrophic factor. 67*P*

THOMAS R.C. Construction and testing of recessed-tip pH-sensitive micro-electrodes. (D) 14*P*

THOMAS R.C. *see* ELLIS D. & THOMAS R.C. The use of Na^+- and pH-sensitive micro-electrodes for direct measurements of the intracellular Na activity or pH in tissues isolated from mammalian heart ventricles. (D) (T) 31*P*

THOMAS S. *see* BISHOP J.H.V., GREEN R. & THOMAS S. Effects of pregnancy on renal handling of glucose in the rat. 53*P*

THOMSON Alex M. *see* RIDGE R.M.A.P. & THOMSON Alex M. Polyneuronal innervation in amphibian skeletal muscle. (D) 2*P*

TOWNSEND Yvonne *see* CRANSTON W.I., HELLON R.F. & TOWNSEND Yvonne Thermal stimulation of intra-abdominal veins in conscious rabbits. 49

UNGAR A. *see* HENDERSON C.G. & UNGAR A. Effect of cholinergic antagonists on sympathetic ganglionic transmission of vasomotor reflexes from the carotid baroreceptors and chemoreceptors of the dog. 379

VAILLANT Camille *see* DOCKRAY G.J., HOPKINS C.R. & VAILLANT Camille Identification of the NH_2-terminal tryptic peptide of big gastrin in hog antral mucosa. 75*P*

WALLIS D.I. *see* ROBERTS M.H.T. & WALLIS D.I. Dorsal and ventral root potentials recorded *in vivo* by the sucrose-gap method. (D) 42*P*

WATERMAN A. *see* LIVINGSTON A. & WATERMAN A. The effects of cholinergic and anticholinergic drugs on ketamine anaesthesia in rats. 56*P*

WATKINS J.C. *see* EVANS R.H. & WATKINS J.C. Dual sites for antagonism of excitatory amino acid actions on central neurones. 57*P*

WEBB A.C. *see* MACKENZIE I.G. & WEBB A.C. A device for determining the receptive field properties of neurones in the visual cerebral cortex of the conscious, mobile cat. (D) 10*P*

WEBB Sandra N. *see* LEWIS D.M., PARDOE Margaret J. & WEBB Sandra N. The effect of denervation on the mechanical and electrical properties of cat skeletal muscle. 48*P*

WELBERS P. *see* ALBERS C., GÖTZ K.H. & WELBERS P. Adaptation of blood gases to diurnal temperature changes in a desert lizard, *Uromastyx ancanthinurus*. 80*P*

WEST D.C. & WOLSTENCROFT J.H. Facilitation of raphespinal and other bulbar raphe neurones by stimulation of the sensorimotor cortex. 47*P*

WEST D.C. *see* LOVICK T.A., WEST D.C. & WOLSTENCROFT J.H. Bulbar raphe neurones with projections to the spinal trigeminal nucleus and the lumbar cord in the cat. 61*P*

WHITE Ralph D. *see* NEAL Michael J. & WHITE Ralph D. Discrimination between descriptive models of L-glutamate uptake by the retina using non-linear regression analysis. 387

WOLSTENCROFT J.H. *see* WEST D.C. & WOLSTENCROFT J.H. Facilitation of raphespinal and other bulbar raphe neurones by stimulation of the sensorimotor cortex. 47*P*

WOLSTENCROFT J.H. *see* LOVICK T.A., WEST D.C. & WOLSTENCROFT J.H. Bulbar raphe neurones with projections to the spinal trigeminal nucleus and the lumbar cord in the cat. 61*P*

WOODCOCK J.P. *see* SKIDMORE R. & WOODCOCK J.P. Physiological significance of arterial models derived using transcutaneous ultrasonic flowmeters. (D) 29*P*

WOODWARD B. Effects of renal perfusate flow on systemic blood pressure in the rat. 80*P*

YATES J.O. *see* DYER R.G., MAYES Linda C., TER HAAR M.B. & YATES J.O. Ovulation in the rat: duration of hypothalamic activation, and not frequency, is the critical parameter. 63*P*

YOUNG J.D. Nucleoside transport in sheep erythrocytes: genetically controlled transport variation and its influence on erythrocyte ATP concentrations. 325

ZEKI S.M. *see* ESSEN D.C. Van & ZEKI S.M. The topographic organization of rhesus monkey prestriate cortex. 193

ZEKI S.M. The cortical projections of foveal striate cortex in the rhesus monkey. 227

ZEKI S.M. The third visual complex of rhesus monkey prestriate cortex. 245

ZEKI S.M. Uniformity and diversity of structure and function in rhesus monkey prestriate visual cortex. 273

CONTENTS OF VOLUME 278

May 1978

CALDWELL P.C. & LEA T.J. Glycine fluxes in squid giant axons. 1

FRÉGNAC Y. & IMBERT M. Early development of visual cortical cells in normal and dark-reared kittens: relationship between orientation, selectivity and ocular dominance. 27

NAKAZATO Y., OHGA A. & ONODA Y. The effect of ouabain on noradrenaline output from peripheral adrenergic neurones of isolated guinea-pig vas deferens. 45

HANSON P.J. & PARSONS D.S. Factors affecting the utilization of ketone bodies and other substrates by rat jejunum: effects of fasting and of diabetes. 55

BRIMBLE M.J., DYBALL R.E.J. & FORSLING Mary L. Oxytocin release following osmotic activation of oxytocin neurones in the paraventricular and supraoptic nuclei. 69

THIBOS Larry N. & WERBLIN Frank S. The response properties of the steady antagonistic surround in the mudpuppy retina. 79

THIBOS Larry N. & WERBLIN Frank S. The properties of surround antagonism elicited by spinning windmill patterns in the mudpuppy retina. 101

ATWATER I., RIBALET B. & ROJAS E. Cyclic changes in potential and resistance of the β-cell membrane induced by glucose in islets of Langerhans from mouse. 117

PERLMAN Ido Kinetics of bleaching and regeneration of rhodopsin in abnormal (RCS) and normal albino rats *in vivo*. 141

PERLMAN Ido Dark-adaptation in abnormal (RCS) rats studied electroretinographically. 161

ASCHER P., MARTY A. & NEILD T.O. Life time and elementary conductance of the channels mediating the excitatory effects of acetylcholine in *Aplysia* neurones. 177

ASCHER P., MARTY A. & NEILD T.O. The mode of action of antagonists of the excitatory response to acetylcholine in *Aplysia* neurones. 207

MARTY A. Noise and relaxation studies of acetylcholine induced currents in the presence of procaine. 237

KANNO T. & SAITO A. Influence of external potassium concentration on secretory responses to cholecystokinin-pancreozymin and ionophore A23187 in the pancreatic acinar cell. 251

MOOLENAAR W.H. & SPECTOR I. Ionic currents in cultured mouse neuroblastoma cells under voltage-clamp conditions. 265

GARCÍA A.G., PELAYO F. & SÁNCHEZ-GARCÍA P. Changes in plasma dopamine β-hydroxylase activity induced by stimulation of the complete sympathetic outflow in the pithed rat. 287

MATSUBARA I. & YAGI N. A time resolved X-ray diffraction study of muscle during twitch. 297

BULLOCK J.O. & SCHAUF C.L. Combined voltage-clamp and dialysis of *Myxicola* axons: behaviour of membrane asymmetry currents. 309

BROWN M.C. & IRONTON R. Sprouting and regression of neuromuscular synapses in partially denervated mammalian muscles. 325

BURGGREN Warren W. Influence of intermittent breathing on ventricular depolarization patterns in chelonian reptiles. 349

DOSTROVSKY J.O., JABBUR S. & MILLAR J. Neurones in cat gracile nucleus with both local and widefield inputs. 365

BAKER G.F., BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Experiments with non-transportable inhibitors. 377

BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Comparison of the effects of cytochalasin B, phloretin and maltose as competitive inhibitors. 389

DUVAL A. & LÉOTY C. Ionic currents in mammalian fast skeletal muscle. 403

BANKS Floyd W. The effect of guanidine on transmitter release in the ciliary ganglion of the chick. 425

STOTHERS J.K. & WARNER Ruth M. Oxygen consumption and neonatal sleep states. 435

BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Exogenous prostaglandins and gastric secretion in the cat. 441

BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Endogenous prostaglandins and gastric secretion in the cat. 451

FRIEDMAN Zeev Y. & SELINGER Zvi A transient release of potassium mediated by the action of substance P on rat parotid slices. 461

AL-MERANI S.A.M.A., BROOKS D.P., CHAPMAN B.J. & MUNDAY K.A. The half-lives of angiotensin II, angiotensin II-amide, angiotensin III, Sar^{1}-Ala^{8}-angiotensin II and renin in the circulatory system of the rat. 471

ERULKAR S.D., RAHAMIMOFF R. & ROTSHENKER S. Quelling of spontaneous transmitter release by nerve impulses in low extracellular calcium solutions. 491

ERULKAR S.D. & RAHAMIMOFF R. The role of calcium ions in tetanic and post-tetanic increase of miniature end-plate potential frequency. 501

MEIRI Halina & RAHAMIMOFF R. Clumping and oscillations in evoked transmitter release at the frog neuromuscular junction. 513

SUNDLÖF Göran & WALLIN B. Gunnar Effect of lower body negative pressure on human muscle nerve sympathetic activity. 525

ADRIAN R.H. & RAKOWSKI R.F. Reactivation of membrane charge movement and delayed potassium conductance in skeletal muscle fibres. 533

PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY

10–11 February 1978

DEMONSTRATIONS

Matthews E.K. & O'Connor M.D.L. Photon Correlation spectroscopy and Laser Doppler anemometry; a new method for determining secretory particle electrophoretic properties. 1*P*

Newman D.L. & Parker K.H. Flow conditions upstream of a model stenosis with pulsatile flow. 2*P*

Glees P., Spoerri O. & Spoerri P.E. Phagocytic properties of oligodendrocytes. 3*P*

COMMUNICATIONS

Wray D. End-plate voltage noise during prolonged application of acetylcholine in cat tennuissimus muscle. 4*P*

Hesketh T.R., Keightley C.A., Metcalfe J.C. & Richards C.D. Long-chain alcohols (C_{10}-C_{12}) can block nerve impulses. 5*P*

Fitzsimons J.T.R., Kerkut G.A. & Sharp G.A. Localization of microtubular ATPase in rat, snail and crab nerves. 6*P*

Wathen G.H. & Weston A.H. The lanthanum technique and its use in measuring calcium ion fluxes. 7*P*

Rees D. A non-phosphate-buffered physiological saline for *in vitro* electrophysiological studies on the mammalian neuromuscular junction. 8*P*

Edman K.A.P. Maximum velocity of shortening in relation to sarcomere length and degree of activation of frog muscle fibres. 9*P*

Alvarez-Leefmans F.J., De Santis A. & Miledi R. Effects of removal of calcium and its replacement by strontium and barium ions on synaptic transmission in frog spinal neurones. 10*P*

Flitney F.W. & MacDonald Shirley L. Thin filament-induced transition between two myosin filament states in a crustacean muscle. 11*P*

Cross Brenda A., Grant B.J.B., Guz A., Jones P.W. & Semple S.J.G. Changes of phrenic motoneurone output associated with altering its relationship to the respiratory oscillations of arterial blood–gas composition. 12*P*

Davis Jane & Winlove C.P. The uptake of low-molecular-weight material by the arterial wall. 13*P*

Baldwin A.L., Caro C.G., Davis J. & Winlove C.P. Structural and mechanical effects of vascular collapse. 14*P*

Chamberlain J.H., Panerai R.B. & Sayers B. McA. Coronary pressure–flow relationships at different phases of the cardiac cycle in the maximally vasodilated left ventricle of the dog. 15*P*

Angell-James Jennifer E. & Bobik A. Modification of blood pressure and aortic baroreceptor activity in propranolol-treated hypertensive rabbits. 16*P*

Hanson M.A., Nye P.C.G. & Torrance R.W. Alteration of respiratory timing by abrupt decreases in carotid body activity. 17*P*

Firrell J.C., Lewis G.P. & Youlten L.J.F. The distribution of plasma albumin as determined by Evans blue dye and human serum albumin. 18*P*

Bakhle Y.S. & Ben-Harari R.R. Metabolism of β-phenylethylamine in rat lung during the oestrous cycle. 19*P*

Beswick F.B., Braganza Joan M. & Howat Henry T. The effect of gastrin II and gastrin pentapeptide on peptic secretion in the anaesthetized cat. 19*P*

Barrowman J.A. & Turner S.G. Cholecystokinin and glucagon are intestinal lymphagogues in the rat. 20*P*

Heading Christine E., Rogers C.S. & Wilkinson S. Absorption of two tyrosine containing dipeptides from the small intestine and rectum of the rat. 21*P*

Bassett J.M. & Madill Denise Glucagon-like immunoreactivity in the gut and plasma of foetal and post-natal lambs. 22*P*

Andrews P.L.R., Bower A.J. & Wakley G. The functional nature of the inferior (nodose) ganglion of the vagus nerve of the domestic hen. 23*P*

Ewart Wendy R. & Logan J.G. Inhibitory responses of neurones in the rat somatosensory cortex to ionophoretically applied desipramine. 23P

Armitage S.E. & Seller T.J. Low threshold sites for vocalizations in the mid-brain of Japanese quail. 24P

Bernardi N., Dacke C.G., Davidson N. & Fawcett Michelle Veratridine stimulates release of [^{14}C]GABA from the *in vivo* superfused rat cerebellar cortex. 25P

Linkens D.A. Canine colonic pacing and coupled oscillator synchronization. 26P

Fillenz M. & Stanford S.C. Biochemical changes in sympathetic nerve terminals of cold-stressed rats. 27P

Daniel P.M., Pratt O.E. & Spargo E. The effect of adrenalectomy on the movement of amino acids between the skeletal muscles and the blood. 28P

Barnard E.A. & Barnard P.J. Therapeutic effect of 5-hydroxytryptamine antagonists on inherited muscular dystrophy in the chicken and hamster. 29P

Che Rosli Bin Che Mat & France Venetia M. Effect of 17β-oestradiol priming on progesterone induced inhibition of fluid transport by male guinea-pig gall-bladder *in vitro*. 30P

Mordue W. & Stone Judith V. The evolution of arthropod neurohormones. 31P

Edmonds C.J. & Smith T. Evidence for two routes of potassium secretion by colonic epithelium. 32P

Adams D., Kempson G.E. & Swanson S.A.V. Direct measurement of local pressures in the cadaveric human hip joint. 33P

Jenkins E.A. & Weightman B. On the mechanism of fatigue in articular cartilage. 34P

Langman V.A., Maloiy G.M.O., Schmidt-Nielsen K. & Schroter R.C. Respiratory water and heat loss in camels subjected to dehydration. 35P

Mordue W. & Rafaeli-Bernstein Ada Glucose transport in Malpighian tubules of *Locusta*. 36P

Gordon D., Nashat F.S., Tappin J.W. & Wilcox C.S. Factor analysis of the interaction of a number of variables that contribute to sodium excretion during acute changes in plasma sodium concentration in anaesthetized dogs. 36P

Chapman B.J., Horn N.M., Munday K.A. & Robertson M.J. Dopamine receptor blockade in the rat kidney. 37P

Brimble M.J., Haller E.W. & Wakerley J.B. Supraoptic and paraventricular units in hypothalamic slices incubated in iso- or hypertonic medium. 38P

Glen A.I.M., Laszlo I., McGovern A. & MacInnes D. X-ray microanalysis of diffusible ions in rat brain. 39P

Walsh E.G. Parkinsonian tremor: production of beats by the application of a rhythmic force. 40P

Ault B. & Evans R.H. The action of catecholamines on the isolated hemisected spinal cord of the immature rat. 41P

Cussons P.D., Matthews P.B.C., Muir R.B. & Watson J.D.G. Enhancement of human elbow tremor by muscle vibration. 42P

Cervero F., Iggo A. & Molony V. Effects of cutaneous stimulation on neurones in the substantia gelatinosa Rolandi of the cat. 43P

Fitzgerald Maria The sensitization of cutaneous nociceptors by spread from a nearby injury and its blockade by local anesthesia. 44P

Djamgoz M.B.A. & Ruddock K.H. Changes in retinal S-potentials of fish (roach) following brief laser beam irradiation. 45P

Bradley P. & Horn G. Afferent connexions of hyperstriatum ventrale in the chick brain. 46P

Shute C.C.D. Influence of centrally active drugs on the McCollough effect. 47P

Brown M.W. & Horn G. Effects of visual experience on unit responses in hyperstriatum of chick brain. 48P

Bloch Susana & Martinoya C. Comparison of frontal and lateral visual acuity of the pigeon, under behavioural fixation. 49P

Einon G., Ikeda Hisako & Tremain K.E. Perikaryal size of cells in the lateral geniculate nucleus and amblyopia in cats reared with convergent squint. 50P

Merrill E.G. & Wall P.D. Selective inhibition of distant afferent input to lamina 4 and 5 cells in cat dorsal spinal cord. 51P

AUTHOR INDEX

(D) Denotes Demonstration (T) Title only

ADAMS D., KEMPSON G.E. & SWANSON S.A.V. Direct measurement of local pressures in the cadaveric human hip joint. 33*P*

ADRIAN R.H. & RAKOWSKI R.F. Reactivation of membrane charge movement and delayed potassium conductance in skeletal muscle fibres. 533

AL-MERANI S.A.M.A., BROOKS D.P., CHAPMAN B.J. & MUNDAY K.A. The half-lives of angiotensin II, angiotensin II-amide, angiotensin III, Sar^1 -Ala^8-angiotensin II and renin in the circulatory system of the rat. 471

ALVAREZ-LEEFMANS F.J., De SANTIS A. & MILEDI R. Effects of removal of calcium and its replacement by strontium and barium ions on synaptic transmission in frog spinal neurones. 10*P*

ANDREWS P.L.R., BOWER A.J. & WAKLEY G. The functional nature of the inferior (nodose) ganglion of the vagus nerve of the domestic hen. 23*P*

ANGELL-JAMES Jennifer E. & BOBIK A. Modification of blood pressure and aortic baroreceptor activity in propranolol-treated hypertensive rabbits. 16*P*

ARMITAGE S.E. & SELLER T.J. Low threshold sites for vocalizations in the mid-brain of Japanese quail. 24*P*

ASCHER P., MARTY A. & NEILD T.O. Life time and elementary conductance of the channels mediating the excitatory effects of acetylcholine in *Aplysia* neurones. 177

ASCHER P., MARTY A. & NEILD T.O. The mode of action of antagonists of the excitatory response to acetylcholine in *Aplysia* neurones. 207

ATWATER I., RIBALET B. & ROJAS E. Cyclic changes in potential and resistance of the β-cell membrane induced by glucose in islets of Langerhans from mouse. 117

AULT B. & EVANS R.H. The action of catecholamines on the isolated hemisected spinal cord of the immature rat. 41*P*

BAKER G.F., BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Experiments with non-transportable inhibitors. 377

BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Exogenous prostaglandins and gastric secretion in the cat. 441

BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Endogenous prostaglandins and gastric secretion in the cat. 451

BAKHLE Y.S. & BEN-HARARI R.R. Metabolism of β-phenylethylamine in rat lung during the oestrous cycle. 19*P*

BALDWIN A.L., CARO C.G., DAVIS J. & WINLOVE C.P. Structural and mechanical effects of vascular collapse. 14*P*

BANKS Floyd W. The effect of guanidine on transmitter release in the ciliary ganglion of the chick. 425

BARNARD E.A. & BARNARD P.J. Therapeutic effect of 5-hydroxytryptamine antagonists on inherited muscular dystrophy in the chicken and hamster. 29*P*

BARNARD P.J. *see* BARNARD E.A. & BARNARD P.J. Therapeutic effect of 5-hydroxytryptamine antagonists on inherited muscular dystrophy in the chicken and hamster. 29*P*

BARROWMAN J.A. & TURNER S.G. Cholecystokinin and glucagon are intestinal lymphagogues in the rat. 20*P*

BASKETTER D.A. *see* BAKER G.F., BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Experiments with non-transportable inhibitors. 377

BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Comparison of the effects of cytochalasin B, phloretin and maltose as competitive inhibitors. 389

BASSETT J.M. & MADILL Denise Glucagon-like immunoreactivity in the gut and plasma of foetal and post-natal lambs. 22*P*

BEN-HARARI R.R. *see* BAKHLE Y.S. & BEN-HARARI R.R. Metabolism of β-phenylethylamine in rat lung during the oestrous cycle. 19*P*

BERNARDI N., DACKE C.G., DAVIDSON N. & FAWCETT Michelle Veratridine stimulates release of [^{14}C]GABA from the *in vivo* superfused rat cerebellar cortex. 25*P*

BESWICK F.B., BRAGANZA Joan M. & HOWAT Henry T. The effect of gastrin II and gastrin pentapeptide on peptic secretion in the anaesthetized cat. 19*P*

BLOCH Susana & MARTINOYA C. Comparison of frontal and lateral visual acuity of the pigeon, under behavioural fixation. 49*P*

BOBIK A. *see* ANGELL-JAMES Jennifer E. & BOBIK A. Modification of blood pressure and aortic baroreceptor activity in propranolol-treated hypertensive rabbits. 16*P*

BOWER A.J. *see* ANDREWS P.L.R., BOWER A.J. & WAKLEY G. The functional nature of the inferior (nodose) ganglion of the vagus nerve of the domestic hen. 23*P*

BRADLEY P. & HORN G. Afferent connexions of hyperstriatum ventrale in the chick brain. 46*P*

BRAGANZA Joan M. *see* BESWICK F.B., BRAGANZA Joan M. & HOWAT Henry T. The effect of gastrin II and gastrin pentapeptide on peptic secretion in the anaesthetized cat. 19*P*

BRIMBLE M.J., HALLER E.W. & WAKERLEY J.B. Supraoptic and paraventricular units in hypothalamic slices incubated in iso- or hypertonic medium. 38*P*

BRIMBLE M.J., DYBALL R.E.J. & FORSLING Mary L. Oxytocin release following osmotic activation of oxytocin neurones in the paraventricular and supraoptic nuclei. 69

BROOKS D.P. *see* AL-MERANI S.A.M.A., BROOKS D.P., CHAPMAN B.J. & MUNDAY K.A. The half-lives of angiotensin II, angiotensin II-amide, angiotensin III, Sar^1-Ala^8-angiotensin II and renin in the circulatory system of the rat. 471

BROWN M.C. & IRONTON R. Sprouting and regression of neuromuscular synapses in partially denervated mammalian muscles. 325

BROWN M.W. & HORN G. Effects of visual experience on unit responses in hyperstriatum of chick brain. 48*P*

BULLOCK J.O. & SCHAUF C.L. Combined voltage-clamp and dialysis of *Myxicola* axons: behaviour of membrane asymmetry currents. 309

BURGGREN Warren W. Influence of intermittent breathing on ventricular depolarization patterns in chelonian reptiles. 349

CALDWELL P.C. & LEA T.J. Glycine fluxes in squid giant axons. 1

CARO C.G. *see* BALDWIN A.L., CARO C.G., DAVIS J. & WINLOVE C.P. Structural and mechanical effects of vascular collapse. 14*P*

CERVERO F., IGGO A. & MOLONY V. Effects of cutaneous stimulation on neurones in the substantia gelatinosa Rolandi of the cat. 43*P*

CHAMBERLAIN J.H., PANERAI R.B. & SAYERS B. McA. Coronary pressure–flow relationships at different phases of the cardiac cycle in the maximally vasodilated left ventricle of the dog. 15*P*

CHAPMAN B.J., HORN N.M., MUNDAY K.A. & ROBERTSON M.J. Dopamine receptor blockade in the rat kidney. 37*P*

CHAPMAN B.J. *see* AL-MERANI S.A.M.A., BROOKS D.P., CHAPMAN B.J. & MUNDAY K.A. The half-lives of angiotensin II, angiotensin II-amide, angiotensin III, Sar^1-Ala^8-angiotensin II and renin in the circulatory system of the rat. 471

CHE ROSLI Bin Che Mat & FRANCE Venetia M. Effect of 17β-oestradiol priming on progesterone induced inhibition of fluid transport by male guinea-pig gall-bladder *in vitro*. 30*P*

CROSS Brenda A., GRANT B.J.B., GUZ A., JONES P.W. & SEMPLE S.J.G. Changes of phrenic motoneurone output associated with altering its relationship to the respiratory oscillations of arterial blood–gas composition. 12*P*

CUSSONS P.D., MATTHEWS P.B.C., MUIR R.B. & WATSON J.D.G. Enhancement of human elbow tremor by muscle vibration. 42*P*

DACKE C.G. *see* BERNARDI N., DACKE C.G., DAVIDSON N. & FAWCETT Michelle Veratridine stimulates release of [^{14}C]GABA from the *in vivo* superfused rat cerebellar cortex. 25*P*

DANIEL P.M., PRATT O.E. & SPARGO E. The effect of adrenalectomy on the movement of amino acids between the skeletal muscles and the blood. 28*P*

DAVIDSON N. *see* BERNARDI N., DACKE C.G., DAVIDSON N. & FAWCETT Michelle Veratridine stimulates release of [^{14}C]GABA from the *in vivo* superfused rat cerebellar cortex. 25*P*

DAVIS J. *see* BALDWIN A.L., CARO C.G., DAVIS J. & WINLOVE C.P. Structural and mechanical effects of vascular collapse. 14*P*

DAVIS Jane & WINLOVE C.P. The uptake of low-molecular-weight material by the arterial wall. 13*P*

De Santis A. *see* Alvarez-Leefmans F.J., De Santis A. & Miledi R. Effects of removal of calcium and its replacement by strontium and barium ions on synaptic transmission in frog spinal neurones. 10*P*

Djamgoz M.B.A. & Ruddock K.H. Changes in retinal S-potentials of fish (roach) following brief laser beam irradiation. 45*P*

Dostrovsky J.O., Jabbur S. & Millar J. Neurones in cat gracile nucleus with both local and widefield inputs. 365

Duval A. & Léoty C. Ionic currents in mammalian fast skeletal muscle. 403

Dyball R.E.J. *see* Brimble M.J., Dyball R.E.J. & Forsling Mary L. Oxytocin release following osmotic activation of oxytocin neurones in the paraventricular and supraoptic nuclei. 69

Edman K.A.P. Maximum velocity of shortening in relation to sarcomere length and degree of activation of frog muscle fibres. 9*P*

Edmonds C.J. & Smith T. Evidence for two routes of potassium secretion by colonic epithelium. 32*P*

Einon G., Ikeda Hisako & Tremain K.E. Perikaryal size of cells in the lateral geniculate nucleus and amblyopia in cats reared with convergent squint. 50*P*

Erulkar S.D., Rahamimoff R. & Rotshenker S. Quelling of spontaneous transmitter release by nerve impulses in low extracellular calcium solutions. 491

Erulkar S.D. & Rahamimoff R. The role of calcium ions in tetanic and post-tetanic increase of miniature end-plate potential frequency. 501

Evans R.H. *see* Ault B. & Evans R.H. The action of catecholamines on the isolated hemisected spinal cord of the immature rat. 41*P*

Ewart Wendy R. & Logan J.G. Inhibitory responses of neurones in the rat somatosensory cortex to ionophoretically applied desipramine. 23*P*

Fawcett Michelle *see* Bernardi N., Dacke C.G., Davidson N. & Fawcett Michelle Veratridine stimulates release of [^{14}C]GABA from the *in vivo* superfused rat cerebellar cortex. 25*P*

Fillenz M. & Stanford S.C. Biochemical changes in sympathetic nerve terminals of cold-stressed rats. 27*P*

Firrell J.C., Lewis G.P. & Youlten L.J.F. The distribution of plasma albumin as determined by Evans blue dye and human serum albumin. 18*P*

Fitzgerald Maria The sensitization of cutaneous nociceptors by spread from a nearby injury and its blockade by local anesthesia. 44*P*

Fitzsimons J.T.R., Kerkut G.A. & Sharp G.A. Localization of microtubular ATPase in rat, snail and crab nerves. 6*P*

Flitney F.W. & MacDonald Shirley L. Thin filament-induced transition between two myosin filament states in a crustacean muscle. 11*P*

Forsling Mary L. *see* Brimble M.J., Dyball R.E.J. & Forsling Mary L. Oxytocin release following osmotic activation of oxytocin neurones in the paraventricular and supraoptic nuclei. 69

France Venetia M. *see* Che Rosli Bin Che Mat & France Venetia M. Effect of 17β-oestradiol priming on progesterone induced inhibition of fluid transport by male guinea-pig gall-bladder *in vitro*. 30*P*

Frégnac Y. & Imbert M. Early development of visual cortical cells in normal and dark-reared kittens: relationship between orientation, selectivity and ocular dominance. 27

Friedman Zeev Y. & Selinger Zvi A transient release of potassium mediated by the action of substance P on rat parotid slices. 461

García A.G., Pelayo F. & Sánchez-García P. Changes in plasma dopamine β-hydroxylase activity induced by stimulation of the complete sympathetic outflow in the pithed rat. 287

Glees P., Spoerri O. & Spoerri P.E. Phagocytic properties of oligodendrocytes. (D) 3*P*

Glen A.I.M., Laszlo I., McGovern A. & MacInnes D. X-ray microanalysis of diffusible ions in rat brain. 39*P*

Gordon D., Nashat F.S., Tappin J.W. & Wilcox C.S. Factor analysis of the interaction of a number of variables that contribute to sodium excretion during acute changes in plasma sodium concentration in anaesthetized dogs. 36*P*

Grant B.J.B. *see* Cross Brenda A., Grant B.J.B., Guz A., Jones P.W. & Semple S.J.G. Changes of phrenic motoneurone output associated with altering its relationship to the respiratory oscillations of arterial blood–gas composition. 12*P*

GUZ A. *see* CROSS Brenda A., GRANT B.J.B., GUZ A., JONES P.W. & SEMPLE S.J.G. Changes of phrenic motoneurone output associated with altering its relationship to the respiratory oscillations of arterial blood–gas composition. 12*P*

HALLER E.W. *see* BRIMBLE M.J., HALLER E.W. & WAKERLEY J.B. Supraoptic and paraventricular units in hypothalamic slices incubated in iso- or hypertonic medium. 38*P*

HANSON M.A., NYE P.C.G. & TORRANCE R.W. Alteration of respiratory timing by abrupt decreases in carotid body activity. 17*P*

HANSON P.J. & PARSONS D.S. Factors affecting the utilization of ketone bodies and other substrates by rat jejunum: effects of fasting and of diabetes. 55

HEADING Christine E., ROGERS C.S. & WILKINSON S. Absorption of two tyrosine containing dipeptides from the small intestine and rectum of the rat. 21*P*

HESKETH T.R., KEIGHTLEY C.A., METCALFE J.C. & RICHARDS C.D. Long-chain alcohols (C_{10}-C_{12}) can block nerve impulses. 5*P*

HORN G. *see* BRADLEY P. & HORN G. Afferent connexions of hyperstriatum ventrale in the chick brain. 46*P*

HORN G. *see* BROWN M.W. & HORN G. Effects of visual experience on unit responses in hyperstriatum of chick brain. 48*P*

HORN N.M. *see* CHAPMAN B.J., HORN N.M., MUNDAY K.A. & ROBERTSON M.J. Dopamine receptor blockade in the rat kidney. 37*P*

HOWAT Henry T. *see* BESWICK F.B., BRAGANZA Joan M. & HOWAT Henry T. The effect of gastrin II and gastrin pentapeptide on peptic secretion in the anaesthetized cat. 19*P*

IGGO A. *see* CERVERO F., IGGO A. & MOLONY V. Effects of cutaneous stimulation on neurones in the substantia gelatinosa Rolandi of the cat. 43*P*

IKEDA Hisako *see* EINON G., IKEDA Hisako & TREMAIN K.E. Perikaryal size of cells in the lateral geniculate nucleus and amblyopia in cats reared with convergent squint. 50*P*

IMBERT M. *see* FRÉGNAC Y. & IMBERT M. Early development of visual cortical cells in normal and dark-reared kittens: relationship between orientation, selectivity and ocular dominance. 27

IRONTON R. *see* BROWN M.C. & IRONTON R. Sprouting and regression of neuromuscular synapses in partially denervated mammalian muscles. 325

JABBUR S. *see* DOSTROVSKY J.O., JABBUR S. & MILLAR J. Neurones in cat gracile nucleus with both local and widefield inputs. 365

JAFFE B.M. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Exogenous prostaglandins and gastric secretion in the cat. 441

JAFFE B.M. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Endogenous prostaglandins and gastric secretion in the cat. 451

JENKINS E.A. & WEIGHTMAN B. On the mechanism of fatigue in articular cartilage. 34*P*

JONES P.W. *see* CROSS Brenda A., GRANT B.J.B., GUZ A., JONES P.W. & SEMPLE S.J.G. Changes of phrenic motoneurone output associated with altering its relationship to the respiratory oscillations of arterial blood–gas composition. 12*P*

KANNO T. & SAITO A. Influence of external potassium concentration on secretory responses to cholecystokinin-pancreozymin and ionophore A23187 in the pancreatic acinar cell. 251

KEIGHTLEY C.A. *see* HESKETH T.R., KEIGHTLEY C.A., METCALFE J.C. & RICHARDS C.D. Long-chain alcohols (C_{10}-C_{12}) can block nerve impulses. 5*P*

KEMPSON G.E. *see* ADAMS D., KEMPSON G.E. & SWANSON S.A.V. Direct measurement of local pressures in the cadaveric human hip joint. 33*P*

KERKUT G.A. *see* FITZSIMONS J.T.R., KERKUT G.A. & SHARP G.A. Localization of microtubular ATPase in rat, snail and crab nerves. 6*P*

LANGMAN V.A., MALOIY G.M.O., SCHMIDT-NIELSEN K. & SCHROTER R.C. Respiratory water and heat loss in camels subjected to dehydration. 35*P*

LASZLO I. *see* GLEN A.I.M., LASZLO I., McGOVERN A. & MacINNES D. X-ray microanalysis of diffusible ions in rat brain. 39*P*

LEA T.J. *see* CALDWELL P.C. & LEA T.J. Glycine fluxes in squid giant axons. 1

LÉOTY C. *see* DUVAL A. & LÉOTY C. Ionic currents in mammalian fast skeletal muscle. 403

LEWIS G.P. *see* FIRRELL J.C., LEWIS G.P. & YOULTEN L.J.F. The distribution of plasma albumin as determined by Evans blue dye and human serum albumin. 18*P*

LINKENS D.A. Canine colonic pacing and coupled oscillator synchronization. 26*P*

LOGAN J.G. *see* EWART Wendy R. & LOGAN J.G. Inhibitory responses of neurones in the rat somatosensory cortex to ionophoretically applied desipramine. 23*P*

MacDONALD Shirley L. *see* FLITNEY F.W. & MacDONALD Shirley L. Thin filament-induced transition between two myosin filament states in a crustacean muscle. 11*P*

McGOVERN A. *see* GLEN A.I.M., LASZLO I., McGOVERN A. & MacINNES D. X-ray microanalysis of diffusible ions in rat brain. 39*P*

MacINNES D. *see* GLEN A.I.M., LASZLO I., McGOVERN A. & MacINNES D. X-ray microanalysis of diffusible ions in rat brain. 39*P*

MADILL Denise *see* BASSETT J.M. & MADILL Denise Glucagon-like immunoreactivity in the gut and plasma of foetal and post-natal lambs. 22*P*

MALOIY G.M.O. *see* LANGMAN V.A., MALOIY G.M.O., SCHMIDT-NIELSEN K. & SCHROTER R.C. Respiratory water and heat loss in camels subjected to dehydration. 35*P*

MARTINOYA C. *see* BLOCH Susana & MARTINOYA C. Comparison of frontal and lateral visual acuity of the pigeon, under behavioural fixation. 49*P*

MARTY A. *see* ASCHER P., MARTY A. & NEILD T.O. Life time and elementary conductance of the channels mediating the excitatory effects of acetylcholine in *Aplysia* neurones. 177

MARTY A. *see* ASCHER P., MARTY A. & NEILD T.O. The mode of action of antagonists of the excitatory response to acetylcholine in *Aplysia* neurones. 207

MARTY A. Noise and relaxation studies of acetylcholine induced currents in the presence of procaine. 237

MATSUBARA I. & YAGI N. A time resolved X-ray diffraction study of muscle during twitch. 297

MATTHEWS E.K. & O'CONNOR M.D.L. Photon Correlation spectroscopy and Laser Doppler anemometry; a new method for determining secretory particle electrophoretic properties. (D) 1*P*

MATTHEWS P.B.C. *see* CUSSONS P.D., MATTHEWS P.B.C., MUIR R.B. & WATSON J.D.G. Enhancement of human elbow tremor by muscle vibration. 42*P*

MEIRI Halina & RAHAMIMOFF R. Clumping and oscillations in evoked transmitter release at the frog neuromuscular junction. 513

MERRILL E.G. & WALL P.D. Selective inhibition of distant afferent input to lamina 4 and 5 cells in cat dorsal spinal cord. 51*P*

METCALFE J.C. *see* HESKETH T.R., KEIGHTLEY C.A., METCALFE J.C. & RICHARDS C.D. Long-chain alcohols (C_{10}-C_{12}) can block nerve impulses. 5*P*

MILEDI R. *see* ALVAREZ-LEEFMANS F.J., De SANTIS A. & MILEDI R. Effects of removal of calcium and its replacement by strontium and barium ions on synaptic transmission in frog spinal neurones. 10*P*

MILLAR J. *see* DOSTROVSKY J.O., JABBUR S. & MILLAR J. Neurones in cat gracile nucleus with both local and widefield inputs. 365

MOLONY V. *see* CERVERO F., IGGO A. & MOLONY V. Effects of cutaneous stimulation on neurones in the substantia gelatinosa Rolandi of the cat. 43*P*

MOOLENAAR W.H. & SPECTOR I. Ionic currents in cultured mouse neuroblastoma cells under voltage-clamp conditions. 265

MORDUE W. & STONE Judith V. The evolution of arthropod neurohormones. 31*P*

MORDUE W. & RAFAELI-BERNSTEIN Ada Glucose transport in Malpighian tubules of *Locusta*. 36*P*

MUIR R.B. *see* CUSSONS P.D., MATTHEWS P.B.C., MUIR R.B. & WATSON J.D.G. Enhancement of human elbow tremor by muscle vibration. 42*P*

MUNDAY K.A. *see* CHAPMAN B.J., HORN N.M., MUNDAY K.A. & ROBERTSON M.J. Dopamine receptor blockade in the rat kidney. 37*P*

MUNDAY K.A. *see* AL-MERANI S.A.M.A., BROOKS D.P., CHAPMAN B.J. & MUNDAY K.A. The half-lives of angiotensin II, angiotensin II-amide, angiotensin III, Sar^1-Ala^8-angiotensin II and renin in the circulatory system of the rat. 471

NAKAZATO Y., OHGA A. & ONODA Y. The effect of ouabain on noradrenaline output from peripheral adrenergic neurones of isolated guinea-pig vas deferens. 45

NASHAT F.S. *see* GORDON D., NASHAT F.S., TAPPIN J.W. & WILCOX C.S. Factor analysis of the interaction of a number of variables that contribute to sodium excretion during acute changes in plasma sodium concentration in anaesthetized dogs. 36*P*

NEILD T.O. *see* ASCHER P., MARTY A. & NEILD T.O. Life time and elementary conductance of the channels mediating the excitatory effects of acetylcholine in *Aplysia* neurones. 177

NEILD T.O. *see* ASCHER P., MARTY A. & NEILD T.O. The mode of action of antagonists of the excitatory response to acetylcholine in *Aplysia* neurones. 207

NEWMAN D.L. & PARKER K.H. Flow conditions upstream of a model stenosis with pulsatile flow. (D) 2*P*

NYE P.C.G. *see* HANSON M.A., NYE P.C.G. & TORRANCE R.W. Alteration of respiratory timing by abrupt decreases in carotid body activity. 17*P*

O'CONNOR M.D.L. *see* MATTHEWS E.K. & O'CONNOR M.D.L. Photon Correlation spectroscopy and Laser Doppler anemometry; a new method for determining secretory particle electrophoretic properties. (D) 1*P*

OHGA A. *see* NAKAZATO Y., OHGA A. & ONODA Y. The effect of ouabain on noradrenaline output from peripheral adrenergic neurones of isolated guinea-pig vas deferens. 45

ONODA Y. *see* NAKAZATO Y., OHGA A. & ONODA Y. The effect of ouabain on noradrenaline output from peripheral adrenergic neurones of isolated guinea-pig vas deferens. 45

PANERAI R.B. *see* CHAMBERLAIN J.H., PANERAI R.B. & SAYERS B. McA. Coronary pressure–flow relationships at different phases of the cardiac cycle in the maximally vasodilated left ventricle of the dog. 15*P*

PARKER K.H. *see* NEWMAN D.L. & PARKER K.H. Flow conditions upstream of a model stenosis with pulsatile flow. (D) 2*P*

PARSONS D.S. *see* HANSON P.J. & PARSONS D.S. Factors affecting the utilization of ketone bodies and other substrates by rat jejunum: effects of fasting and of diabetes. 55

PELAYO F. *see* GARCÍA A.G., PELAYO F. & SÁNCHEZ-GARCÍA P. Changes in plasma dopamine β-hydroxylase activity induced by stimulation of the complete sympathetic outflow in the pithed rat. 287

PERLMAN Ido Kinetics of bleaching and regeneration of rhodopsin in abnormal (RCS) and normal albino rats *in vivo*. 141

PERLMAN Ido Dark-adaptation in abnormal (RCS) rats studied electroretino-graphically. 161

PRATT O.E. *see* DANIEL P.M., PRATT O.E. & SPARGO E. The effect of adrenalectomy on the movement of amino acids between the skeletal muscles and the blood. 28*P*

RAFAELI-BERNSTEIN Ada *see* MORDUE W. & RAFAELI-BERNSTEIN Ada Glucose transport in Malpighian tubules of *Locusta*. 36*P*

RAHAMIMOFF R. *see* ERULKAR S.D., RAHAMIMOFF R. & ROTSHENKER S. Quelling of spontaneous transmitter release by nerve impulses in low extracellular calcium solutions. 491

RAHAMIMOFF R. *see* ERULKAR S.D. & RAHAMIMOFF R. The role of calcium ions in tetanic and post-tetanic increase of miniature end-plate potential frequency. 501

RAHAMIMOFF R. *see* MEIRI Halina & RAHAMIMOFF R. Clumping and oscillations in evoked transmitter release at the frog neuromuscular junction. 513

RAKOWSKI R.F. *see* ADRIAN R.H. & RAKOWSKI R.F. Reactivation of membrane charge movement and delayed potassium conductance in skeletal muscle fibres. 533

REED J.D. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Exogenous prostaglandins and gastric secretion in the cat. 441

REED J.D. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Endogenous prostaglandins and gastric secretion in the cat. 451

REES D. A non-phosphate-buffered physiological saline for *in vitro* electrophysiological studies on the mammalian neuromuscular junction. 8*P*

RIBALET B. *see* ATWATER I., RIBALET B. & ROJAS E. Cyclic changes in potential and resistance of the β-cell membrane induced by glucose in islets of Langerhans from mouse. 117

RICHARDS C.D. *see* HESKETH T.R., KEIGHTLEY C.A., METCALFE J.C. & RICHARDS C.D. Long-chain alcohols (C_{10}-C_{12}) can block nerve impulses. 5*P*

ROBERTSON M.J. *see* CHAPMAN B.J., HORN N.M., MUNDAY K.A. & ROBERTSON M.J. Dopamine receptor blockade in the rat kidney. 37*P*

ROGERS C.S. *see* HEADING Christine E., ROGERS C.S. & WILKINSON S. Absorption of two tyrosine containing dipeptides from the small intestine and rectum of the rat. 21*P*

ROJAS E. *see* ATWATER I., RIBALET B. & ROJAS E. Cyclic changes in potential and resistance of the β-cell membrane induced by glucose in islets of Langerhans from mouse. 117

ROTSHENKER S. *see* ERULKAR S.D., RAHAMIMOFF R. & ROTSHENKER S. Quelling of spontaneous transmitter release by nerve impulses in low extracellular calcium solutions. 491

RUDDOCK K.H. *see* DJAMGOZ M.B.A. & RUDDOCK K.H. Changes in retinal S-potentials of fish (roach) following brief laser beam irradiation. 45*P*

SAITO A. *see* KANNO T. & SAITO A. Influence of external potassium concentration on secretory responses to cholecystokinin-pancreozymin and ionophore A23187 in the pancreatic acinar cell. 251

SÁNCHEZ-GARCÍA P. *see* GARCÍA A.G., PELAYO F. & SÁNCHEZ-GARCÍA P. Changes in plasma dopamine β-hydroxylase activity induced by stimulation of the complete sympathetic outflow in the pithed rat. 287

SAYERS B. McA. *see* CHAMBERLAIN J.H., PANERAI R.B. & SAYERS B. McA. Coronary pressure–flow relationships at different phases of the cardiac cycle in the maximally vasodilated left ventricle of the dog. 15*P*

SCHAUF C.L. *see* BULLOCK J.O. & SCHAUF C.L. Combined voltage-clamp and dialysis of *Myxicola* axons: behaviour of membrane asymmetry currents. 309

SCHMIDT-NIELSEN K. *see* LANGMAN V.A., MALOIY G.M.O., SCHMIDT-NIELSEN K. & SCHROTER R.C. Respiratory water and heat loss in camels subjected to dehydration. 35*P*

SCHROTER R.C. *see* LANGMAN V.A., MALOIY G.M.O., SCHMIDT-NIELSEN K. & SCHROTER R.C. Respiratory water and heat loss in camels subjected to dehydration. 35*P*

SELINGER Zvi *see* FRIEDMAN Zeev Y. & SELINGER Zvi A transient release of potassium mediated by the action of substance P on rat parotid slices. 461

SELLER T.J. *see* ARMITAGE S.E. & SELLER T.J. Low threshold sites for vocalizations in the mid-brain of Japanese quail. 24*P*

SEMPLE S.J.G. *see* CROSS Brenda A., GRANT B.J.B., GUZ A., JONES P.W. & SEMPLE S.J.G. Changes of phrenic motoneurone output associated with altering its relationship to the respiratory oscillations of arterial blood–gas composition. 12*P*

SHARP G.A. *see* FITZSIMONS J.T.R., KERKUT G.A. & SHARP G.A. Localization of microtubular ATPase in rat, snail and crab nerves. 6*P*

SHAW B. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Exogenous prostaglandins and gastric secretion in the cat. 441

SHAW B. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Endogenous prostaglandins and gastric secretion in the cat. 451

SHUTE C.C.D. Influence of centrally active drugs on the McCollough effect. 47*P*

SMITH T. *see* EDMONDS C.J. & SMITH T. Evidence for two routes of potassium secretion by colonic epithelium. 32*P*

SPARGO E. *see* DANIEL P.M., PRATT O.E. & SPARGO E. The effect of adrenalectomy on the movement of amino acids between the skeletal muscles and the blood. 28*P*

SPECTOR I. *see* MOOLENAAR W.H. & SPECTOR I. Ionic currents in cultured mouse neuroblastoma cells under voltage-clamp conditions. 265

SPOERRI O. *see* GLEES P., SPOERRI O. & SPOERRI P.E. Phagocytic properties of oligodendrocytes. (D) 3*P*

SPOERRI P.E. *see* GLEES P., SPOERRI O. & SPOERRI P.E. Phagocytic properties of oligodendrocytes. (D) 3*P*

STANFORD S.C. *see* FILLENZ M. & STANFORD S.C. Biochemical changes in sympathetic nerve terminals of cold-stressed rats. 27*P*

STONE Judith V. *see* MORDUE W. & STONE Judith V. The evolution of arthropod neurohormones. 31*P*

STOTHERS J.K. & WARNER Ruth M. Oxygen consumption and neonatal sleep states. 435

SUNDLÖF Göran & WALLIN B. Gunnar Effect of lower body negative pressure on human muscle nerve sympathetic activity. 525

SWANSON S.A.V. *see* ADAMS D., KEMPSON G.E. & SWANSON S.A.V. Direct measurement of local pressures in the cadaveric human hip joint. 33*P*

TAPPIN J.W. *see* GORDON D., NASHAT F.S., TAPPIN J.W. & WILCOX C.S. Factor analysis of the interaction of a number of variables that contribute to sodium excretion during acute changes in plasma sodium concentration in anaesthetized dogs. 36*P*

THIBOS Larry N. & WERBLIN Frank S. The response properties of the steady antagonistic surround in the mudpuppy retina. 79

THIBOS Larry N. & WERBLIN Frank S. The properties of surround antagonism elicited by spinning windmill patterns in the mudpuppy retina. 101

TORRANCE R.W. *see* HANSON M.A., NYE P.C.G. & TORRANCE R.W. Alteration of respiratory timing by abrupt decreases in carotid body activity. 17*P*

TREMAIN K.E. *see* EINON G., IKEDA Hisako & TREMAIN K.E. Perikaryal size of cells in the lateral geniculate nucleus and amblyopia in cats reared with convergent squint. 50*P*

TURNER S.G. *see* BARROWMAN J.A. & TURNER S.G. Cholecystokinin and glucagon are intestinal lymphagogues in the rat. 20*P*

VENABLES C.W. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Exogenous prostaglandins and gastric secretion in the cat. 441

VENABLES C.W. *see* BAKER R., JAFFE B.M., REED J.D., SHAW B. & VENABLES C.W. Endogenous prostaglandins and gastric secretion in the cat. 451

WAKERLEY J.B. *see* BRIMBLE M.J., HALLER E.W. & WAKERLEY J.B. Supraoptic and paraventricular units in hypothalamic slices incubated in iso- or hypertonic medium. 38*P*

WAKLEY G. *see* ANDREWS P.L.R., BOWER A.J. & WAKLEY G. The functional nature of the inferior (nodose) ganglion of the vagus nerve of the domestic hen. 23*P*

WALLIN B. Gunnar *see* SUNDLÖF Göran & WALLIN B. Gunnar Effect of lower body negative pressure on human muscle nerve sympathetic activity. 525

WALL P.D. *see* MERRILL E.G. & WALL P.D. Selective inhibition of distant afferent input to lamina 4 and 5 cells in cat dorsal spinal cord. 51*P*

WALSH E.G. Parkinsonian tremor: production of beats by the application of a rhythmic force. 40*P*

WARNER Ruth M. *see* STOTHERS J.K. & WARNER Ruth M. Oxygen consumption and neonatal sleep states. 435

WATHEN G.H. & WESTON A.H. The lanthanum technique and its use in measuring calcium ion fluxes. 7*P*

WATSON J.D.G. *see* CUSSONS P.D., MATTHEWS P.B.C., MUIR R.B. & WATSON J.D.G. Enhancement of human elbow tremor by muscle vibration. 42*P*

WEIGHTMAN B. *see* JENKINS E.A. & WEIGHTMAN B. On the mechanism of fatigue in articular cartilage. 34*P*

WERBLIN Frank S. *see* THIBOS Larry N. & WERBLIN Frank S. The response properties of the steady antagonistic surround in the mudpuppy retina. 79

WERBLIN Frank S. *see* THIBOS Larry N. & WERBLIN Frank S. The properties of surround antagonism elicited by spinning windmill patterns in the mudpuppy retina. 101

WESTON A.H. *see* WATHEN G.H. & WESTON A.H. The lanthanum technique and its use in measuring calcium ion fluxes. 7*P*

WIDDAS W.F. *see* BAKER G.F., BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Experiments with non-transportable inhibitors. 377

WIDDAS W.F. *see* BASKETTER D.A. & WIDDAS W.F. Asymmetry of the hexose transfer system in human erythrocytes. Comparison of the effects of cytochalasin B, phloretin and maltose as competitive inhibitors. 389

WILCOX C.S. *see* GORDON D., NASHAT F.S., TAPPIN J.W. & WILCOX C.S. Factor analysis of the interaction of a number of variables that contribute to sodium excretion during acute changes in plasma sodium concentration in anaesthetized dogs. 36*P*

WILKINSON S. *see* HEADING Christine E., ROGERS C.S. & WILKINSON S. Absorption of two tyrosine containing dipeptides from the small intestine and rectum of the rat. 21*P*

WINLOVE C.P. *see* DAVIS Jane & WINLOVE C.P. The uptake of low-molecular-weight material by the arterial wall. 13*P*

WINLOVE C.P. *see* BALDWIN A.L., CARO C.G., DAVIS J. & WINLOVE C.P. Structural and mechanical effects of vascular collapse. 14*P*

WRAY D. End-plate voltage noise during prolonged application of acetylcholine in cat tennuissimus muscle. 4*P*

YAGI N. *see* MATSUBARA I. & YAGI N. A time resolved X-ray diffraction study of muscle during twitch. 297

YOULTEN L.J.F. *see* FIRRELL J.C., LEWIS G.P. & YOULTEN L.J.F. The distribution of plasma albumin as determined by Evans blue dye and human serum albumin. 18*P*

CONTENTS OF VOLUME 279

June 1978

BENNETT T. & GARDINER Sheila M. Reversal of 6-hydroxydopamine-induced hypotension in the rat without activation of the renin–angiotensin system. 1

GARRARD C.S. & LANE D. J. The pattern of stimulated breathing in man during non-elastic expiratory loading. 17

HILL-SMITH Ian & PURVES Robert D. Synaptic delay in the heart: an iontophoretic study. 31

BIGNETTI E., CAVAGGIONI A. & SORBI R.T. Light-activated hydrolysis of GTP and cyclic GMP in the rod outer segments. 55

BAUMANN Ch. The equilibrium between metarhodopsin I and metarhodopsin II in the isolated frog retina. 71

GOODWIN Guy M., HOFFMAN Donna & LUSCHEI Erich S. The strength of the reflex response to sinusoidal stretch of monkey jaw closing muscles during voluntary contraction. 81

BORSOOK D., LABURN Helen & MITCHELL D. The febrile responses in rabbits and rats to leucocyte pyrogens of different species. 113

MAILMAN David Effects of vasoactive intestinal polypeptide on intestinal absorption and blood flow. 121

De CARO G., MASSI M. & MICOSSI L.G. Antidipsogenic effect of intracranial injections of substance P in rats. 133

MARIER Susan H., PUTNEY Jr. James W. & Van de WALLE Cynthia M. Control of calcium channels by membrane receptors in the rat parotid gland. 141

EGGER M. David Sensitization and habituation of dorsal horn cells in cats. 153

HAGIWARA S., MIYAZAKI S., MOODY W. & PATLAK J. Blocking effects of barium and hydrogen ions on the potassium current during anomalous rectification in the starfish egg. 167

GRIEGER Thomas A. & KLUGER Matthew J. Fever and survival: the role of serum iron. 187

MATTHEWS-BELLINGER Julia & SALPETER Miriam M. Distribution of acetylcholine receptors at frog neuromuscular junctions with a discussion of some physiological implications. 197

KONISHI Shiro & KRAVITZ Edward A. The physiological properties of amine-containing neurones in the lobster nervous system. 215

HOMMA S. & ROVAINEN C. M. Conductance increases produced by glycine and γ-aminobutyric acid in lamprey interneurones. 231

BARRETT Ellen F., BARRETT J.N., BOTZ D., CHANG D.B. & MAHAFFEY D. Temperature-sensitive aspects of evoked and spontaneous transmitter release at the frog neuromuscular junction. 253

KEATINGE W.R. Mechanism of slow discharges of sheep carotid artery. 275

EL-SHARKAWY T.Y., MORGAN Kathleen G. & SZURSZEWSKI J.H. Intracellular electrical activity of canine and human gastric smooth muscle. 291

EL-SHARKAWY T.Y. & SZURSZEWSKI J.H. Modulation of canine antral circular smooth muscle by acetylcholine, noradrenaline and pentagastrin. 309

MARSHALL Lawrence M. & WERBLIN Frank S. Synaptic transmission to the horizontal cells in the retina of the larval tiger salamander. 321

PERKINS M.N. & WHITEHEAD Saffron A. Responses and pharmacological properties of preoptic/anterior hypothalamic neurones following medial forebrain bundle stimulation. 347

COOKE K.R. Ouabain and regulation of cellular volume in freshly prepared slices of rabbit renal cortex. 361

COOKE K.R. Effects of ouabain and potassium-free media on cellular volume regulation in rat renal cortical slices. 375

CHAN S.T.H. & WONG P.Y.D. Evidence of active sodium transport in the visceral yolk sac of the rat *in vitro*. 385

LINDEN R.W.A. Properties of intraoral mechanoreceptors represented in the mesencephalic nucleus of the fifth nerve in the cat. 395

APPENTENG K., O'DONOVAN M.J., SOMJEN G., STEPHENS J.A. & TAYLOR A. The projection of jaw elevator muscle spindle afferents to fifth nerve motoneurones in the cat. 409

DOCHERTY R.J. & MCQUEEN D.S. Inhibitory action of dopamine on cat carotid chemoreceptors. 425

SHAPOVALOV A.I., SHIRIAEV B.I. & VELUMIAN A.A. Mechanisms of post-synaptic excitation in amphibian motoneurones. 437

HOUSE C.R. & SMITH R.K. On the receptors involved in the nervous control of salivary secretion by *Nauphoeta cinerea* Olivier. 457

BOWSER-RILEY F., HOUSE C.R. & SMITH R.K. Competitive antagonism by phentolamine of responses to biogenic amines and the transmitter at a neuroglandular junction. 473

FLEET I.R. & PEAKER M. Mammary function and its control at the cessation of lactation in the goat. 491

LISNEY S.J.W. & MATTHEWS B. Branched afferent nerves supplying tooth-pulp in the cat. 509

TAKAHASHI Kunitaro & YOSHII Mitsunobu Effects of internal free calcium upon the sodium and calcium channels in the tunicate egg analysed by the internal perfusion technique. 519

MATTHEWS Gary & WICKELGREN Warren O. Evoked depolarizing and hyperpolarizing potentials in reticulospinal axons of lamprey. 551

MORI Kensaku & TAKAGI Sadayuki F. An intracellular study of dendro-dendritic inhibitory synapses on mitral cells in the rabbit olfactory bulb. 569

MORI Kensaku & TAKAGI Sadayuki F. Activation and inhibition of olfactory bulb neurones by anterior commissure volleys in the rabbit. 589

ARITO Heihachiro, IINO Masae & TAKAGI Sadayuki F. Water response of the frog olfactory epithelium as observed from the olfactory bulb. 605

BELL D.R., PINTER G.G. & WILSON P.D. Albumin permeability of the peritubular capillaries in the rat renal cortex. 621

HUYNH-THU T. & LAMMERANT J. Adenosine-induced release of cyclic adenosine 3′,5′-monophosphate from the left ventricle in the anaesthetized intact dog. 641

GLITSCH H.G. & POTT L. Effects of acetylcholine and parasympathetic nerve stimulation on membrane potential in quiescent guinea-pig atria. 655

AUTHOR INDEX

APPENTENG K., O'DONOVAN M.J., SOMJEN G., STEPHENS J.A. & TAYLOR A. The projection of jaw elevator muscle spindle afferents to fifth nerve motoneurones in the cat. 409

ARITO Heihachiro, IINO Masae & TAKAGI Sadayuki F. Water response of the frog olfactory epithelium as observed from the olfactory bulb. 605

BARRETT Ellen F., BARRETT J.N., BOTZ D., CHANG D.B. & MAHAFFEY D. Temperature-sensitive aspects of evoked and spontaneous transmitter release at the frog neuromuscular junction. 253

BARRETT J.N. *see* BARRETT Ellen F., BARRETT J.N., BOTZ D., CHANG D.B. & MAHAFFEY D. Temperature-sensitive aspects of evoked and spontaneous transmitter release at the frog neuromuscular junction. 253

BAUMANN Ch. The equilibrium between metarhodopsin I and metarhodopsin II in the isolated frog retina. 71

BELL D.R., PINTER G.G. & WILSON P.D. Albumin permeability of the peritubular capillaries in the rat renal cortex. 621

BENNETT T. & GARDINER Sheila M. Reversal of 6-hydroxydopamine-induced hypotension in the rat without activation of the renin–angiotensin system. 1

BIGNETTI E., CAVAGGIONI A. & SORBI R.T. Light-activated hydrolysis of GTP and cyclic GMP in the rod outer segments. 55

BORSOOK D., LABURN Helen & MITCHELL D. The febrile responses in rabbits and rats to leucocyte pyrogens of different species. 113

BOTZ D. *see* BARRETT Ellen F., BARRETT J.N., BOTZ D., CHANG D.B. & MAHAFFEY D. Temperature-sensitive aspects of evoked and spontaneous transmitter release at the frog neuromuscular junction. 253

BOWSER-RILEY F., HOUSE C.R. & SMITH R.K. Competitive antagonism by phentolamine of responses to biogenic amines and the transmitter at a neuroglandular junction. 473

CAVAGGIONI A. *see* BIGNETTI E., CAVAGGIONI A. & SORBI R.T. Light-activated hydrolysis of GTP and cyclic GMP in the rod outer segments. 55

CHANG D.B. *see* BARRETT Ellen F., BARRETT J.N., BOTZ D., CHANG D.B. & MAHAFFEY D. Temperature-sensitive aspects of evoked and spontaneous transmitter release at the frog neuromuscular junction. 253

CHAN S.T.H. & WONG P.Y.D. Evidence of active sodium transport in the visceral yolk sac of the rat *in vitro*. 385

COOKE K.R. Ouabain and regulation of cellular volume in freshly prepared slices of rabbit renal cortex. 361

COOKE K.R. Effects of ouabain and potassium-free media on cellular volume regulation in rat renal cortical slices. 375

De CARO G., MASSI M. & MICOSSI L.G. Antidipsogenic effect of intracranial injections of substance P in rats. 133

DOCHERTY R.J. & McQUEEN D.S. Inhibitory action of dopamine on cat carotid chemoreceptors. 425

EGGER M. David Sensitization and habituation of dorsal horn cells in cats. 153

EL-SHARKAWY T.Y., MORGAN Kathleen G. & SZURSZEWSKI J.H. Intracellular electrical activity of canine and human gastric smooth muscle. 291

EL-SHARKAWY T.Y. & SZURSZEWSKI J.H. Modulation of canine antral circular smooth muscle by acetylcholine, noradrenaline and pentagastrin. 309

FLEET I.R. & PEAKER M. Mammary function and its control at the cessation of lactation in the goat. 491

GARDINER Sheila M. *see* BENNETT T. & GARDINER Sheila M. Reversal of 6-hydroxydopamine-induced hypotension in the rat without activation of the renin–angiotensin system. 1

GARRARD C.S. & LANE D. J. The pattern of stimulated breathing in man during non-elastic expiratory loading. 17

GLITSCH H.G. & POTT L. Effects of acetylcholine and parasympathetic nerve stimulation on membrane potential in quiescent guinea-pig atria. 655

GOODWIN Guy M., HOFFMAN Donna & LUSCHEI Erich S. The strength of the reflex response to sinusoidal stretch of monkey jaw closing muscles during voluntary contraction. 81

GRIEGER Thomas A. & KLUGER Matthew J. Fever and survival: the role of serum iron. 187

HAGIWARA S., MIYAZAKI S., MOODY W. & PATLAK J. Blocking effects of barium and hydrogen ions on the potassium current during anomalous rectification in the starfish egg. 167

HILL-SMITH Ian & PURVES Robert D. Synaptic delay in the heart: an ionophoretic study. 31

HOFFMAN Donna *see* GOODWIN Guy M., HOFFMAN Donna & LUSCHEI Erich S. The strength of the reflex response to sinusoidal stretch of monkey jaw closing muscles during voluntary contraction. 81

HOMMA S. & ROVAINEN C. M. Conductance increases produced by glycine and γ-aminobutyric acid in lamprey interneurones. 231

HOUSE C.R. & SMITH R.K. On the receptors involved in the nervous control of salivary secretion by *Nauphoeta cinerea* Olivier. 457

HOUSE C.R. *see* BOWSER-RILEY F., HOUSE C.R. & SMITH R.K. Competitive antagonism by phentolamine of responses to biogenic amines and the transmitter at a neuroglandular junction. 473

HUYNH-THU T. & LAMMERANT J. Adenosine-induced release of cyclic adenosine 3′,5′-monophosphate from the left ventricle in the anaesthetized intact dog. 641

IINO Masae *see* ARITO Heihachiro, IINO Masae & TAKAGI Sadayuki F. Water response of the frog olfactory epithelium as observed from the olfactory bulb. 605

KEATINGE W.R. Mechanism of slow discharges of sheep carotid artery. 275

KLUGER Matthew J. *see* GRIEGER Thomas A. & KLUGER Matthew J. Fever and survival: the role of serum iron. 187

KONISHI Shiro & KRAVITZ Edward A. The physiological properties of amine-containing neurones in the lobster nervous system. 215

KRAVITZ Edward A. *see* KONISHI Shiro & KRAVITZ Edward A. The physiological properties of amine-containing neurones in the lobster nervous system. 215

LABURN Helen *see* BORSOOK D., LABURN Helen & MITCHELL D. The febrile responses in rabbits and rats to leucocyte pyrogens of different species. 113

LAMMERANT J. *see* HUYNH-THU T. & LAMMERANT J. Adenosine-induced release of cyclic adenosine 3′,5′-monophosphate from the left ventricle in the anaesthetized intact dog. 641

LANE D. J. *see* GARRARD C.S. & LANE D. J. The pattern of stimulated breathing in man during non-elastic expiratory loading. 17

LINDEN R.W.A. Properties of intraoral mechanoreceptors represented in the mesencephalic nucleus of the fifth nerve in the cat. 395

LISNEY S.J.W. & MATTHEWS B. Branched afferent nerves supplying tooth-pulp in the cat. 509

LUSCHEI Erich S. *see* GOODWIN Guy M., HOFFMAN Donna & LUSCHEI Erich S. The strength of the reflex response to sinusoidal stretch of monkey jaw closing muscles during voluntary contraction. 81

McQUEEN D.S. *see* DOCHERTY R.J. & McQUEEN D.S. Inhibitory action of dopamine on cat carotid chemoreceptors. 425

MAHAFFEY D. *see* BARRETT Ellen F., BARRETT J.N., BOTZ D., CHANG D.B. & MAHAFFEY D. Temperature-sensitive aspects of evoked and spontaneous transmitter release at the frog neuromuscular junction. 253

MAILMAN David Effects of vasoactive intestinal polypeptide on intestinal absorption and blood flow. 121

MARIER Susan H., PUTNEY Jr. James W. & Van de WALLE Cynthia M. Control of calcium channels by membrane receptors in the rat parotid gland. 141

MARSHALL Lawrence M. & WERBLIN Frank S. Synaptic transmission to the horizontal cells in the retina of the larval tiger salamander. 321

MASSI M. *see* De CARO G., MASSI M. & MICOSSI L.G. Antidipsogenic effect of intracranial injections of substance P in rats. 133

MATTHEWS B. *see* LISNEY S.J.W. & MATTHEWS B. Branched afferent nerves supplying tooth-pulp in the cat. 509

MATTHEWS-BELLINGER Julia & SALPETER Miriam M. Distribution of acetylcholine receptors at frog neuromuscular junctions with a discussion of some physiological implications. 197

MATTHEWS Gary & WICKELGREN Warren O. Evoked depolarizing and hyperpolarizing potentials in reticulospinal axons of lamprey. 551

MICOSSI L.G. *see* DE CARO G., MASSI M. & MICOSSI L.G. Antidipsogenic effect of intracranial injections of substance P in rats. 133

MITCHELL D. *see* BORSOOK D., LABURN Helen & MITCHELL D. The febrile responses in rabbits and rats to leucocyte pyrogens of different species. 113

MIYAZAKI S. *see* HAGIWARA S., MIYAZAKI S., MOODY W. & PATLAK J. Blocking effects of barium and hydrogen ions on the potassium current during anomalous rectification in the starfish egg. 167

MOODY W. *see* HAGIWARA S., MIYAZAKI S., MOODY W. & PATLAK J. Blocking effects of barium and hydrogen ions on the potassium current during anomalous rectification in the starfish egg. 167

MORGAN Kathleen G. *see* EL-SHARKAWY T.Y., MORGAN Kathleen G. & SZURSZEWSKI J.H. Intracellular electrical activity of canine and human gastric smooth muscle. 291

MORI Kensaku & TAKAGI Sadayuki F. An intracellular study of dendrodendritic inhibitory synapses on mitral cells in the rabbit olfactory bulb. 569

MORI Kensaku & TAKAGI Sadayuki F. Activation and inhibition of olfactory bulb neurones by anterior commissure volleys in the rabbit. 589

O'DONOVAN M.J. *see* APPENTENG K., O'DONOVAN M.J., SOMJEN G., STEPHENS J.A. & TAYLOR A. The projection of jaw elevator muscle spindle afferents to fifth nerve motoneurones in the cat. 409

PATLAK J. *see* HAGIWARA S., MIYAZAKI S., MOODY W. & PATLAK J. Blocking effects of barium and hydrogen ions on the potassium current during anomalous rectification in the starfish egg. 167

PEAKER M. *see* FLEET I.R. & PEAKER M. Mammary function and its control at the cessation of lactation in the goat. 491

PERKINS M.N. & WHITEHEAD Saffron A. Responses and pharmacological properties of preoptic/anterior hypothalamic neurones following medial forebrain bundle stimulation. 347

PINTER G.G. *see* BELL D.R., PINTER G.G. & WILSON P.D. Albumin permeability of the peritubular capillaries in the rat renal cortex. 621

POTT L. *see* GLITSCH H.G. & POTT L. Effects of acetylcholine and parasympathetic nerve stimulation on membrane potential in quiescent guinea-pig atria. 655

PURVES Robert D. *see* HILL-SMITH Ian & PURVES Robert D. Synaptic delay in the heart: an ionophoretic study. 31

PUTNEY Jr. James W. *see* MARIER Susan H., PUTNEY Jr. James W. & Van de WALLE Cynthia M. Control of calcium channels by membrane receptors in the rat parotid gland. 141

ROVAINEN C. M. *see* HOMMA S. & ROVAINEN C. M. Conductance increases produced by glycine and γ-aminobutyric acid in lamprey interneurones. 231

SALPETER Miriam M. *see* MATTHEWS-BELLINGER Julia & SALPETER Miriam M. Distribution of acetylcholine receptors at frog neuromuscular junctions with a discussion of some physiological implications. 197

SHAPOVALOV A.I., SHIRIAEV B.I. & VELUMIAN A.A. Mechanisms of post-synaptic excitation in amphibian motoneurones. 437

SHIRIAEV B.I. *see* SHAPOVALOV A.I., SHIRIAEV B.I. & VELUMIAN A.A. Mechanisms of post-synaptic excitation in amphibian motoneurones. 437

SMITH R.K. *see* HOUSE C.R. & SMITH R.K. On the receptors involved in the nervous control of salivary secretion by *Nauphoeta cinerea* Olivier. 457

SMITH R.K. *see* BOWSER-RILEY F., HOUSE C.R. & SMITH R.K. Competitive antagonism by phentolamine of responses to biogenic amines and the transmitter at a neuroglandular junction. 473

SOMJEN G. *see* APPENTENG K., O'DONOVAN M.J., SOMJEN G., STEPHENS J.A. & TAYLOR A. The projection of jaw elevator muscle spindle afferents to fifth nerve motoneurones in the cat. 409

SORBI R.T. *see* BIGNETTI E., CAVAGGIONI A. & SORBI R.T. Light-activated hydrolysis of GTP and cyclic GMP in the rod outer segments. 55

STEPHENS J.A. *see* APPENTENG K., O'DONOVAN M.J., SOMJEN G., STEPHENS J.A. & TAYLOR A. The projection of jaw elevator muscle spindle afferents to fifth nerve motoneurones in the cat. 409

SZURSZEWSKI J.H. *see* EL-SHARKAWY T.Y., MORGAN Kathleen G. & SZURSZEWSKI J.H. Intracellular electrical activity of canine and human gastric smooth muscle. 291

SZURSZEWSKI J.H. *see* EL-SHARKAWY T.Y. & SZURSZEWSKI J.H. Modulation of canine antral circular smooth muscle by acetylcholine, noradrenaline and pentagastrin. 309

TAKAGI Sadayuki F. *see* MORI Kensaku & TAKAGI Sadayuki F. An intracellular study of dendro-dendritic inhibitory synapses on mitral cells in the rabbit olfactory bulb. 569

TAKAGI Sadayuki F. *see* MORI Kensaku & TAKAGI Sadayuki F. Activation and inhibition of olfactory bulb neurones by anterior commissure volleys in the rabbit. 589

TAKAGI Sadayuki F. *see* ARITO Heihachiro, IINO Masae & TAKAGI Sadayuki F. Water response of the frog olfactory epithelium as observed from the olfactory bulb. 605

TAKAHASHI Kunitaro & YOSHII Mitsunobu Effects of internal free calcium upon the sodium and calcium channels in the tunicate egg analysed by the internal perfusion technique. 519

TAYLOR A. *see* APPENTENG K., O'DONOVAN M.J., SOMJEN G., STEPHENS J.A. & TAYLOR A. The projection of jaw elevator muscle spindle afferents to fifth nerve motoneurones in the cat. 409

Van de WALLE Cynthia M. *see* MARIER Susan H., PUTNEY Jr. James W. & Van de WALLE Cynthia M. Control of calcium channels by membrane receptors in the rat parotid gland. 141

VELUMIAN A.A. *see* SHAPOVALOV A.I., SHIRIAEV B.I. & VELUMIAN A.A. Mechanisms of post-synaptic excitation in amphibian motoneurones. 437

WERBLIN Frank S. *see* MARSHALL Lawrence M. & WERBLIN Frank S. Synaptic transmission to the horizontal cells in the retina of the larval tiger salamander. 321

WHITEHEAD Saffron A. *see* PERKINS M.N. & WHITEHEAD Saffron A. Responses and pharmacological properties of preoptic/anterior hypothalamic neurones following medial forebrain bundle stimulation. 347

WICKELGREN Warren O. *see* MATTHEWS Gary & WICKELGREN Warren O. Evoked depolarizing and hyperpolarizing potentials in reticulospinal axons of lamprey. 551

WILSON P.D. *see* BELL D.R., PINTER G.G. & WILSON P.D. Albumin permeability of the peritubular capillaries in the rat renal cortex. 621

WONG P.Y.D. *see* CHAN S.T.H. & WONG P.Y.D. Evidence of active sodium transport in the visceral yolk sac of the rat *in vitro*. 385

YOSHII Mitsunobu *see* TAKAHASHI Kunitaro & YOSHII Mitsunobu Effects of internal free calcium upon the sodium and calcium channels in the tunicate egg analysed by the internal perfusion technique. 519